

Melanie Bissett

09/509548 Heat Insulating Coating

=> d his

(FILE 'HOME' ENTERED AT 10:32:20 ON 11 MAR 2002)

FILE 'HCAPLUS, WPIDS, RAPRA, WSCA' ENTERED AT 10:33:01 ON 11 MAR 2002

L1 3295247 S (COAT? OR FILM# OR SPRAY? OR LAMINAT?)
L2 126879 S (CHIRAL? OR ACHIRAL? OR NEMATIC OR CHOLESTERIC? OR
A(2W)CHIRA
L3 647316 S (IR OR INFRARED? OR INFRA(2W)RED? OR IR(2W)REFLECT#####)
L4 134688 S ((HEAT# OR THERMAL##) (3N)INSULAT####)
L5 144 S NON(2W)MICELLAR OR NONMISCELLAR
L6 316100 S (AUTO# OR AUTOMOBILE OR CAR)
L7 16477 S WINDSCREEN OR WINDSHIELD
L8 713430 S INSULAT####
L9 12912 S (LIQUID(2A)CRYSTAL(2A)POLYMER# OR LCP#)
L10 1644672 S GLASS OR WINDOW OR WINDOWPANE OR WINDOW(2W)PANE OR PANE OR
VI
L11 2532154 S MONOMER##### OR POLYMER#####
L12 8792 S L1 AND L2
L13 340 S L12 AND L3
L14 5 S L13 AND L4
L15 4228 S L1(10N)L2
L16 172 S L15 AND L3
L17 48 S L15(10N)L3
L18 79516 S L1 AND L3
L19 996 S L18 AND L4
L20 0 S L18 AND L5
L21 6324 S L1(10N)L10 AND L3
L22 14 S L21 AND L6(10N)L7
L23 5 S L1 AND L5
L24 0 S L23 AND (L2 OR L3 OR L4)
L25 0 S L23 AND (L10)
L26 574 S L1 AND L6(10N)L7
L27 20 S L26 AND L3
L28 9 S L26 AND L4
L29 312992 S L1 AND L10
L30 6408 S L29 AND L4
L31 301 S L30 AND L3
L32 2 S L31 AND L2
L33 19 S L14 OR L23 OR L28 OR L32
L34 68 S L17 OR L22 OR L27
L35 85 S L33 OR L34
L36 83 DUP REM L35 (2 DUPLICATES REMOVED)

=> d L14 abs, ibib 1-5

L14 ANSWER ① OF 5 HCAPLUS COPYRIGHT 2002 ACS

AB The colorant compn. comprises at least 1 or more cholesteric
liq. crystal polymer with a helical pitch between 760 nm and 500 .mu.m,
and at least 1 colorant having an absorption region in this area. The
colorant is org. or inorg. pigment or dye. The colorant compn. show
improved heat-insulative characteristics. The compn.
is suitable for electrophotog. toners, ink-jet printing inks, or
heat-insulative coatings.

ACCESSION NUMBER: 1999:672412 HCAPLUS

Melanie Bissett

09/509548 Heat Insulating Coating

DOCUMENT NUMBER: 131:305121
TITLE: **IR-reflective** colorant composition
INVENTOR(S): Schonfeld, Axel; Stohr, Andreas
PATENT ASSIGNEE(S): Clariant GmbH, Germany
SOURCE: Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
<u>EP 950701</u>	A1	19991020	EP 1999-106917	19990408
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19817069	A1	19991021	DE 1998-19817069	19980417
JP 2000080319	A2	20000321	JP 1999-109447	19990416
US 6180025 L14	ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2002 ACS			
AB	The colorant compn. comprises at least 1 or more cholesteric liq. crystal polymer with a helical pitch between 760 nm and 500 .mu.m, and at least 1 colorant having an absorption region in this area. The colorant is org. or inorg. pigment or dye. The colorant compn. show improved heat-insulative characteristics. The compn. is suitable for electrophotog. toners, ink-jet printing inks, or heat-insulative coatings .			
ACCESSION NUMBER: 1999:672412 HCAPLUS				
DOCUMENT NUMBER: 131:305121				
TITLE: IR-reflective colorant composition				
INVENTOR(S): Schonfeld, Axel; Stohr, Andreas				
PATENT ASSIGNEE(S): Clariant GmbH, Germany				
SOURCE: Eur. Pat. Appl., 12 pp. CODEN: EPXXDW				
DOCUMENT TYPE: Patent				
LANGUAGE: German				
FAMILY ACC. NUM. COL14 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2002 ACS				
AB	The colorant compn. comprises at least 1 or more cholesteric liq. crystal polymer with a helical pitch between 760 nm and 500 .mu.m, and at least 1 colorant having an absorption region in this area. The colorant is org. or inorg. pigment or dye. The colorant compn. show improved heat-insulative characteristics. The compn. is suitable for electrophotog. toners, ink-jet printing inks, or heat-insulative coatings .			
ACCESSION NUMBER: 1999:672412 HCAPLUS				
DOCUMENT NUMBER: 131:305121				
TITLE: IR-reflective***L14 ANSWER 1 OF 5 HCAPLUS				
COPYRIGHT 2002 ACS				
AB	The colorant compn. comprises at least 1 or more ***cholesteric liq. crystal polymer with a helical pitch between 760 nm and 500 .mu.m, and at least 1 colorant having an absorption region in this area. The colorant is org. or inorg. pigment or dye. The colorant compn. show improved heat-insulative characteristics. The compn. is suitable for electrophotog. toners, ink-jet printing inks, or heat-insulative coatings .			
ACCESSION NUMBER: 1999:672412 HCAPLUS				
DOCUMENT NUMBER: 131:305121				

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09/509548 Heat Insulating Coating

TITLE: **IR-reflective** colorant composition
INVENTOR(S): Schonfeld, Axel; Stohr, Andreas
PATENT ASSIGNEE(S): Clariant GmbH, Germany
SOURCE: Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 950701	A1	19991020	EP 1999-106917	19990408
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19817069	A1	19991021	DE 1998-19817069	19980417
JP 2000080319	A2	20000321	JP 1999-109447	19990416
US 6180025	B1	20010130	US 1999-293700	19990416
PRIORITY APPLN. INFO.:			DE 1998-19817069 A	19980417
OTHER SOURCE(S):			MARPAT 131:305121	
REFERENCE COUNT: 5			THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE	

FORMAT

L14 ANSWER (2) OF 5 HCAPLUS COPYRIGHT 2002 ACS
AB The coatings comprise .gtoreq.1 **cholesteric** layers reflecting .gtoreq.40, esp.45%, of the incident radiation at wavelengths >750. esp. 751-2000 nm. The **coatings** are formed by depositing on a transparent substrate .gtoreq.1 **IR-reflecting cholesteric** layers, hardening the layers, and, optionally, .gtoreq.1 **IR-reflecting cholesteric** layers, and, optionally, a medium reversing the direction of rotation of the transmitted circularly polarized radiation, and hardening the layers. A **cholesteric coating** contg. cellulose acetobutyrate 0.027 and 2,4,6-trimethylbenzoyldiphenylphosphine oxide 0.073 mol reflected 47% of radiation of wavelength 943 nm.

ACCESSION NUMBER: 1999:265927 HCAPLUS
DOCUMENT NUMBER: 130:270776
TITLE: **IR-reflecting thermally insulating coatings**, their formation, the multicomponent layer systems obtained and their use, and adhesive foils comprising the **thermally insulating coating**
INVENTOR(S): Siemensmeyer, Karl; Schuhmacher, Peter; Meyer, Frank; Schneider, Norbert; Ishida, Hiroki
PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9919267	A1	19990422	WO 1998-EP6527	19981014

own patent

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W: AL, AU, BG, BR, BY, CA, CN, CZ, GE, HU, ID, IL, JP, KR, KZ, LT, LV, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TR, UA, US, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

DE 19745647 A1 19990422 DE 1997-19745647 19971015

AU 9911540 A1 19990503 AU 1999-11540 19981014

EP 1025057 A1 20000809 EP 1998-954417 19981014

R: AT, BE, DE, DK, ES, FR, GB, IT, NL, SE, PT

BR 9813066 A 20000822 BR 1998-13066 19981014

JP 2001519317 T2 20011023 JP 2000-515844 19981014

NO 2000001845 A 20000410 NO 2000-1845 20000410

PRIORITY APPLN. INFO.:

DE 1997-19745647 A 19971015

WO 1998-EP6527 W 19981014

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L14 ANSWER ③ OF 5 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 1999-582553 [50] WPIDS

AB EP 950701 A UPAB: 19991201

NOVELTY - Color composition is based on cholesteric liquid crystal (LC) polymer(s) with a helical pitch of 760 nm to 500 microns and colorant(s) absorbing visible light.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of producing the composition.

USE - The color is used as a constituent of electrophotographic toners, in ink-jet inks or as starting material for the production of thermal insulation coatings (all claimed). It is especially useful for coatings, e.g. in automobile lacquers and for producing pigment flakes but is also useful for making moldings, e.g. injection moldings, extruded profiles or tubes, tapes, **films** or fibers.

ADVANTAGE - The composition gives level colors, in both the unaligned and the heat-reflecting aligned state, whereas the color of compositions containing **infrared (IR)-reflecting coated mica flakes** varies with viewing angle.

Dwg.0/0

ACCESSION NUMBER: 1999-582553 [50] WPIDS

DOC. NO. NON-CPI: N1999-430359

DOC. NO. CPI: C1999-169608

TITLE: Color composition useful in electrophotographic toner, ink-jet ink, **coating** or **thermal insulation coating** giving level color not varying with viewing angle.

DERWENT CLASS: A14 A23 A26 A32 A60 A82 A89 E21 E22 E23 E24 E36 G02 G05 G08 P81 P84 S06 T04

INVENTOR(S): SCHOENFELD, A; STOHR, A

PATENT ASSIGNEE(S): (CLRN) CLARIANT GMBH

COUNTRY COUNT: 28

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 950701	A1	19991020	(199950)*	GE	12

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09/509548 Heat Insulating Coating

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI
DE 19817069 A1 19991021 (199950)
JP 2000080319 A 20000321 (200025) 8
KR 99083244 A 19991125 (200055)
US 6180025 B1 20010130 (200108)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 950701	A1	EP 1999-106917	19990408
DE 19817069	A1	DE 1998-19817069	19980417
JP 2000080319	A	JP 1999-109447	19990416
KR 99083244	A	KR 1999-13477	19990416
US 6180025	B1	US 1999-293700	19990416

PRIORITY APPLN. INFO: DE 1998-19817069 19980417

L14 ANSWER ④ OF 5 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 1999-255808 [22] WPIDS
AB DE 19745647 A UPAB: 19990609

NOVELTY - Heat insulation covering comprises a cholesteric layer(s) that reflects at least 40, preferably at least 45% of light of IR wavelength, preferably above 750, especially 751-2000 nm.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the production of the above material by applying a **cholesteric IR-reflecting** layer to a transparent substrate and curing, a multi-component comprising components suitable for giving **cholesteric** layers, and **heat insulation** covering sheets, preferably adhesive sheets, made of the above.

USE - In the production of **insulating** windows or **heat-insulating** building materials, office-, home- or industry-insulation and in the automobile sector, particularly for bonded glass (all claimed).

ADVANTAGE - The **coating** does not contain environmentally undesirable metals, and is transparent in the electromagnetic wavelength range but hardly absorbent in the IR range, avoiding heating-up of the **coated** article.

Dwg.0/0

ACCESSION NUMBER: 1999-255808 [22] WPIDS
DOC. NO. NON-CPI: N1999-190511
DOC. NO. CPI: C1999-075049
TITLE: **Heat insulation** covering for e.g. insulation and in automobile sector.
DERWENT CLASS: A32 A82 A93 A95 G02 G03 L01 P81 Q43 Q67
INVENTOR(S): ISHIDA, H; MEYER, F; SCHNEIDER, N; SCHUHMACHER, P; SIEMENSMEYER, K
PATENT ASSIGNEE(S): (BADI) BASF AG
COUNTRY COUNT: 48
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
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09/509548 Heat Insulating Coating

DE 19745647 A1 19990422 (199922)* 28 own patent
WO 9919267 A1 19990422 (199923) GE
RW: AT BE CH CY DE DK EA ES FI FR GB GR IE IT LU MC NL PT SE
W: AL AU BG BR BY CA CN CZ GE HU ID IL JP KR KZ LT LV MX NO NZ PL RO
RU SG SI SK TR UA US
AU 9911540 A 19990503 (199937)
EP 1025057 A1 20000809 (200039) GE
R: AT BE DE DK ES FR GB IT NL PT SE
NO 2000001845 A 20000410 (200039)
BR 9813066 A 20000822 (200050)
CN 1276773 A 20001213 (200118)
KR 2001024514 A 20010326 (200161)
JP 2001519317 W 20011023 (200202) 59

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19745647	A1	DE 1997-19745647	19971015
WO 9919267	A1	WO 1998-EP6527	19981014
AU 9911540	A	AU 1999-11540	19981014
EP 1025057	A1	EP 1998-954417	19981014
		WO 1998-EP6527	19981014
NO 2000001845	A	WO 1998-EP6527	19981014
		NO 2000-1845	20000410
BR 9813066	A	BR 1998-13066	19981014
		WO 1998-EP6527	19981014
CN 1276773	A	CN 1998-810274	19981014
KR 2001024514	A	KR 2000-704065	20000415
JP 2001519317	W	WO 1998-EP6527	19981014
		JP 2000-515844	19981014

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9911540	A Based on	WO 9919267
EP 1025057	A1 Based on	WO 9919267
BR 9813066	A Based on	WO 9919267
JP 2001519317	W Based on	WO 9919267

PRIORITY APPLN. INFO: DE 1997-19745647 19971015

L14 ANSWER 5 OF 5 RAPRA COPYRIGHT 2002 RAPRA
AN R:816301 RAPRA
AB A colourant composition consists essentially of one or more
cholesteric liquid-crystalline polymers having a pitch of the
helical superstructure of between 760 nm and 500 micrometers and at
least one colourant, which absorbs light in the visible wavelength range.
Suitable colourants are organic or inorganic pigments or dyes.
Coatings composed of the colourant compositions exhibit
heat insulation properties.

ACCESSION NUMBER: R:816301 RAPRA
FILE SEGMENT: Rapra Abstracts
TITLE: INFRARED-REFLECTING COLORANTS.

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09/509548 Heat Insulating Coating

INVENTOR: Schoenfeld A; Stohr A
PATENT ASSIGNEE: Clariant GmbH
PATENT INFORMATION: US 6180025 B1 20010130
APPLICATION INFORMATION: US 1999-293700 19990416
PRIORITY APPLN. INFO: DE 1998-19817069 19980417
DOCUMENT TYPE: Patent
LANGUAGE: English

colorant composition

INVENTOR(S): Schonfeld, Axel; Stohr, Andreas
PATENT ASSIGNEE(S): Clariant GmbH, Germany
SOURCE: Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 950701	A1	19991020	EP 1999-106917	19990408
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19817069	A1	19991021	DE 1998-19817069	19980417
JP 2000080319	A2	20000321	JP 1999-109447	19990416
US 6180025	B1	20010130	US 1999-293700	19990416
PRIORITY APPLN. INFO.:			DE 1998-19817069 A	19980417
OTHER SOURCE(S):	MARPAT 131:305121			
REFERENCE COUNT:	5	THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE		

FORMAT

=> D L22 abs, bib 4,5

L22 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2002 ACS

AB Coatings, which prevent shattering of automobile windscreens upon impact or fracture, comprise interpenetrating networks of crosslinked polycaprolactone (I)-based polyurethanes and partially crosslinked vinyl acrylic copolymers, with the whole formed in the presence of a controlled quantity of polyester urethane acrylate. Thus, linear I (mol. wt. 1000, OH value 112 mg KOH/g) 35, N-vinyl-2-pyrrolidone 22.3, 2-ethylhexyl acrylate 7, pentaerythritol triacrylate 7, hexanediol diacrylate 3, and linear urethane-acrylate polyester (2 mol 1,6-hexanediol) 8 parts were reacted with 1.2 mol 2-hydroxyethyl acrylate and 2.2 mol 4,4'-methylenebis(cyclohexyl isocyanate) under reflux and then mixed with 1.5 parts 2-hydroxy-2-methyl-1-phenyl-1-propanone [7473-98-5] photoinitiator and 0.2 part silicone flow-control agent. This mixt. (84 parts) was mixed with 16 parts hexamethylene diisocyanate biuret (26.5% NCO), applied to a **laminated glass** windscreen, and cured by a Hg/quartz arc lamp for 40 s and heated in an **IR** oven at 130.degree. for 7 min to give a coating that prevented shattering of the windscreen upon impact after 28 days aging.

AN 1984:632043 HCAPLUS
DN 101:232043
TI Motor vehicle windscreen
IN Sebastiano, Francesco

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PA Societa Italiana Vetro SIV S.p.A., Italy

SO Eur. Pat. Appl., 16 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 117512	A2	19840905	EP 1984-101805	19840221
	EP 117512	A3	19860312		
	EP 117512	B1	19880706		
	R: BE, DE, FR, GB, LU, NL, SE				
	US 4541881	A	19850917	US 1984-577785	19840207
	CA 1211358	A1	19860916	CA 1984-446882	19840207
	JP 59182252	A2	19841017	JP 1984-25276	19840215
	JP 2571355	B2	19970116		
	ES 530008	A1	19851001	ES 1984-530008	19840224
PRAI	IT 1983-19779		19830225		

L22 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2002 ACS

AB A plate **glass** was **coated** by vacuum deposition with 350 .ANG. WO₃, 350 .ANG. Ag, and then 100 .ANG. WO₃, overlaid with a 15 mm poly(vinyl butyral) sheet and then a plate glass, and hot-pressed to give an automobile window glass with visible light transmittance 75%, visible light reflectance 19%, sunlight transmittance 55%, and **IR reflectance** 75%.

AN 1980:624625 HCAPLUS

DN 93:224625

TI Heat ray-reflecting glass for automobiles

PA Asahi Glass Co., Ltd., Japan; Honda Motor Co., Ltd.

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 55067547	A2	19800521	JP 1978-137808	19781110

=> d L22 abs, bib 6-9,13,14

L22 ANSWER 6 OF 14 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 2002-085275 [12] WPIDS

AB JP2001174626 A UPAB: 20020221

NOVELTY - A near **infrared** radiation-absorbing layer, containing a near **infrared** radiation absorber consisting of a diimonium-based compound and a copper polysulfide complex, is formed on the surface of a transparent base material film.

DETAILED DESCRIPTION - The near **infrared** radiation-absorbing layer contains a near **infrared** radiation absorber consisting of a diimonium-based compound, and a copper complex of formula (I) and/or a copper compound of formula (II).

USE - The near **infrared** radiation-absorbing **film** is used for a plasma display, or automobile **window** shield.

ADVANTAGE - The near **infrared** radiation-absorbing film has dramatically superior heat resistance, humidity resistance, and ultraviolet ray resistance, and has no decrease in near **infrared** radiation absorption performance for a long period of time.

Dwg.0/1

AN 2002-085275 [12] WPIDS

DNN N2002-063408 DNC C2002-026032

TI Near **infrared** radiation-absorbing film for plasma display and **automobile windshield** has near **infrared** radiation-absorbing layer containing near **infrared** radiation absorber comprising diimonium-based compound and copper polysulfide complex.

DC A89 E19 L03 P81 V05

PA (BRID) BRIDGESTONE CORP

CYC 1

PI JP 2001174626 A 20010629 (200212)* 7p

ADT JP 2001174626 A JP 1999-354717 19991214

PRAI JP 1999-354717 19991214

L22 ANSWER OF 14 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 2001-093730 [11] WPIDS

AB EP 1060876 A UPAB: 20010224

NOVELTY - The glazing includes at least two glass pieces joined by a thermoplastic layer and a solar protection layer which reflects radiation outside the visible spectrum of solar radiation, especially infrared rays. A transparent, low-emission layer that reflects thermal radiation is located more towards the interior than the solar protection layer.

DETAILED DESCRIPTION - The thermal radiation reflecting layer is a layer of doped metal oxide, especially fluorine-doped tin oxide, preferably deposited by pyrolysis, and has at least one sublayer and/or

at

least one over-layer, and especially a mechanically resistant protection layer.

The solar protection layer comprises a stack of layers including at least one metal layer incorporated between two layers of metal oxide or nitride, e.g. AlN or Si3N4, in particular at least one silver-based

layer.

An INDEPENDENT CLAIM is given for use of the glazing as a **windscreen**, a side window, a rear window or roof of a **car** vehicle.

USE - **Windscreen**, side window, rear window or roof of a **car** vehicle.

ADVANTAGE - The glazing possesses both solar protection and thermal insulating functions.

Dwg.0/0

AN 2001-093730 [11] WPIDS

DNN N2001-071106 DNC C2001-027807

TI Transparent laminated glazing for cars that reflects solar and thermal rays comprises at least two glass pieces joined by a thermoplastic layer and a solar protection layer.

DC A95 L01 P73 Q12

IN KRAEMLING, F; KRAEMLING, F

PA (COMP) SEKURIT SAINT GOBAIN DEUT GMBH & CO KG; (COMP) SAINT-GOBAIN

VITRAGE

CYC 29

PI EP 1060876 A2 20001220 (200111)* FR 5p
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI
DE 19927683 C1 20010125 (200111)
JP 2001039742 A 20010213 (200112) 14p
BR 2000002698 A 20010313 (200118)
CZ 2000002293 A3 20010411 (200130)
KR 2001069207 A 20010723 (200203)
ADT EP 1060876 A2 EP 2000-401676 20000614; DE 19927683 C1 DE 1999-19927683
19990617; JP 2001039742 A JP 2000-179434 20000615; BR 2000002698 A BR
2000-2698 20000619; CZ 2000002293 A3 CZ 2000-2293 20000619; KR 2001069207
A KR 2000-33367 20000616
PRAI DE 1999-19927683 19990617

L22 ANSWER 8 OF 14 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 2001-032303 [04] WPIDS

AB WO 200076930 A UPAB: 20010118

NOVELTY - The article comprises a substrate having a first dielectric layer containing zinc stannate, an infrared reflective layer, a metal primer layer, a second dielectric layer and protective layer having metal and/or silicon containing films.

DETAILED DESCRIPTION - An **infrared** reflective coated article comprises:

(A) a substrate;

(B) a dielectric layer sputtered over the substrate, having

(a) a first zinc stannate film containing (wt.%) 10 at least Zn at least 90 and 10 at least Sn at least 90, and

(b) an electrical enhancing film selected from ZnO, SnO and a second zinc stannate film (where the first zinc stannate film is at least 5 wt.% different from the second);

(C) an **infrared** reflective layer;

(D) a metal primer layer;

(E) a second dielectric layer; and

(F) a protective layer having at least two films selected from metal and/or silicon containing films, e.g. metal and/or silicon, and metal oxy and/or silicon oxy materials, where the oxy materials are selected from oxides or oxynitrides, and the metal is selected from one or more transition metals of group 4, 5, 6 or 10.

An INDEPENDENT CLAIM is also included for a method of making a transparent article for an automobile, which comprises:

(I) applying a **coating** as above to a **glass** substrate;

(II) processing the coated substrate to form a coated windscreen blank, by heating it to its bending temperature, where after heating, the coating has reduced haze; and

(III) **laminating** the **coated** blank to another piece of **glass**.

USE - For an **infrared** reflective coated **automobile windscreen**.

ADVANTAGE - The coatings have good mechanical and chemical durability, making them suitable for shipping and heat treating with reduced haze.

Dwg.0/0

AN 2001-032303 [04] WPIDS

DNC C2001-009959

TI **Infrared** reflective coated **automobile**

windscreen, comprises substrate, first zinc stannate dielectric layer, **infrared** reflective layer, metal primer layer, second dielectric layer and protective layer.

DC L01 M13

IN O'SHAUGHNESSY, D J

PA (PITT) PPG IND OHIO INC

CYC 90

PI WO 2000076930 A1 20001221 (200104)* EN 43p

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TZ UG ZW

W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES
FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS
LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL
TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

AU 2000054673 A 20010102 (200121)

ADT WO 2000076930 A1 WO 2000-US15576 20000606; AU 2000054673 A AU 2000-54673
20000606

FDT AU 2000054673 A Based on WO 200076930

PRAI US 1999-334193 19990616

L22 ANSWER ⑨ OF 14 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 2000-442607 [38] WPIDS

CR 2000-442608 [38]

AB WO 200037376 A UPAB: 20020226

NOVELTY - A **coated glass** article has an exterior surface bearing a low emissivity water-sheeting coating. The coating includes a pyrolytically applied dielectric first layer and an exterior layer of silica sputtered on the first layer.

DETAILED DESCRIPTION - The **coated glass** article has an exterior surface bearing a low emissivity water-sheeting coating. The coating comprises a first pyrolytically applied dielectric layer on the exterior surface and an exterior layer of silica sputtered on top of the first layer. The low-emissivity coating reduces the contact angle of water on the coated exterior surface below 25 deg. and causes water applied to the coated exterior surface to sheet.

INDEPENDENT CLAIMS are also included for:

(1) an **automobile windscreen** comprising

(a) an outer pane of glass having an exterior surface and a first bonded surface,

(b) an inner pane of glass having an interior surface and a second bonded surface,

(c) a tear-resistant polymeric layer between the two bonded surfaces,
and

(d) the low emissivity water-sheeting coating;

(2) a method of rendering a surface of a pane of glass resistant to soiling and staining, comprising

(i) providing a sheet of glass having clean interior and exterior surfaces, the exterior surface bears pyrolytically applied dielectric layer having a contact angle with water of at least 30 deg. ,

(ii) coating the interior surface with a reflective coating by sputtering, in sequence, first dielectric layer(s), metal layer(s), and second dielectric layer(s), and

(iii) **coating** the exterior surface of the **glass** with a water-sheeting **coating** by sputtering silica directly onto the outer surface of the applied dielectric layer yielding a

low-emissivity water sheeting coating with a contact angle with water below 25 deg. which causes water on the **coated** surface of the **pane** to sheet.

USE - For use in insulated glass units.

ADVANTAGE - Has a glass pane surface that is resistant to soiling and staining.

Dwg.0/5

AN 2000-442607 [38] WPIDS

CR 2000-442608 [38]

DNC C2000-134691

TI **Coated glass** article for insulated **glass** units, has an exterior surface with low emissivity water sheeting **coating**.

DC L01 P73

IN BOND, B; HARTIG, K; KRISKO, A; PFAFF, G; STANEK, R; KRISKO, A J

PA (CARD-N) CARDINAL IG CO

CYC 85

PI WO 2000037376 A1 20000629 (200038)* EN 42p

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
OA PT SD SE SL SZ UG ZW

W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK EE ES FI GB
GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV
MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT
UA UG US UZ VN YU ZW

AU 9954692 A 20000712 (200048)

JP 2001002450 A 20010109 (200107) 58p

NO 2001003034 A 20010820 (200157)

EP 1144328 A1 20011017 (200169) EN

R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

GB 2363131 A 20011212 (200205)

GB 2364068 A 20020116 (200213)

ADT WO 2000037376 A1 WO 1999-US17876 19990806; AU 9954692 A AU 1999-54692
19990806; JP 2001002450 A JP 2000-137148 20000501; NO 2001003034 A WO
1999-US17876 19990806, NO 2001-3034 20010619; EP 1144328 A1 EP

1999-940937

19990806, WO 1999-US17876 19990806; GB 2363131 A Derived from GB

2001-16268 20010703, GB 2001-22692 20010920; GB 2364068 A Derived from GB

2001-16268 19990202, GB 2001-22691 20010920

FDT AU 9954692 A Based on WO 200037376; EP 1144328 A1 Based on WO 200037376

PRAI US 1999-134705P 19990518; US 1998-113259P 19981221; WO 1999-US2208
19990202

L22 ANSWER 13 OF 14 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 1989-201505 [28] WPIDS

AB JP 01138541 A UPAB: 19930923

A pair of transparent glass panels sandwich a layer of light adjusting resin, which consists of a mixt. of a polybutyral resin, epoxy resin and

a

photochromic substance, pref. also contg. an UV absorber, an IR absorber, and/or an antioxidant.

Specifically the light adjusting resin formation is dissolved in a mixed solvents of ethanol, butanol and methylethyl ketone and spread over a flat plate to obtain a film, which is sandwiched.

ADVANTAGE - Rapid responses to the light intensity, requiring no driving power source. The colour change of the resin layer is reversible

and the range of use temp. is wide. Useful for **automobile** sun roof or **windshield** and for mirrors.

0/3

AN 1989-201505 [28] WPIDS

DNN N1989-153849 DNC C1989-089284

TI Light adjusting **laminated glass** for car sunroof, etc. - comprising **glass** panels sandwiching mixt. of poly butyral resin, epoxy resin and photochromic substance.

DC A14 A21 A89 L01 P73 P81 Q48

PA (NPDE) NIPPONDENSO CO LTD

CYC 1

PI JP 01138541 A 19890531 (198928)* 6p

ADT JP 01138541 A JP 1987-298005 19871126

PRAI JP 1987-298005 19871126

L22 ANSWER 14 OF 14 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 1986-049961 [08] WPIDS

AB EP 172143 A UPAB: 19930922

A composite ribbon, which can be wound as a coil, consists of (a) an elastomeric, transparent, intermediate film of acrylate resin, 0.4-2 mm thick, as intermediate **film** for safety **laminated glass** panels, and (b) 2 external **films** of plastic resin, transparent to visible UV and **IR** light, inert to the polymerisation reaction for forming the acrylate resin, and less than 50 microns thick, and is made by (1) continuously laying down a polymerisable

mixt. of (meth)acrylic or vinylic monomers, on one of the external films and applying the 2nd external film, (2) polymerising the mixt. to an acrylate resin by a 1st irradiation with light in the visible UV and **IR** range, with the UV forming not more than 10% of the total radiation, and by a 2nd irradiation with **IR** radiation for a total of 45 mins.-3 h., and (3) winding the composite ribbon into a coil.

USE/ADVANTAGE - Prodn. is continuous. Self-bonding during prodn. is prevented. A safety **laminated glass** panel, with an intermediate 0.4-2 mm layer of an acrylate resin, as obtd. from the composite ribbon, is claimed.

0/1

ABEQ EP 172143 B UPAB: 19930922

A process for the manufacture of a continuous composite ribbon consisting of an intermediate film and two external films of a plastic resin, that may be wound as a coil, characterised by the steps of; laying down in a continuous way a polymerisable mixture of monomers selected from the class

consisting of acrylic, methacrylic, and vinylic monomers, on the one of two external films; applying in a continuous way the second external film upon said mixture; polymerising said mixture to an acrylate resin by means

of a first irradiation with light radiations in the range of visible ultraviolet and of **infrared** spectrum, wherein the radiation in the visible ultraviolet spectrum constitutes not more than 10% of the total irradiation, and by means of a second irradiation with light radiation in the range of **infrared** spectrum for a total period of time ranging from 45minutes to 3 hours, so as to obtain a composite ribbon consisting of an elastomeric, transparent, intermediate film

formed

of acrylate resin, having a thickness from 0.4 to 2 millimeters, to be used as an intermediate layer for safety **laminated glass** panels and of two external **films** of a plastic resin, transparent to visible ultraviolet light and to **infrared** light, which is inert to a polymerisation reaction for forming said acrylate resin, having a thickness lower than 50 micrometres, and winding the so obtained composite ribbon into a coil.

ABEQ US 4734143 A UPAB: 19930922

Prod'n. of safety glass, by polymerising as a continuous ribbon, a mixt. of

(A) 1 pt.wt. of a compsn. of polymerisable monomers including 60-97 pts.wt. (meth)acrylic ester, 0-2 pts.wt. (meth)acrylic acid, 0-5 pts.wt. N-2-vinylpyrrolidone, 0-5 pts.wt. (meth)acrylic acid ester including glycidyl gps.; (B) 0.16-1.2 pts.wt. of a plasticiser (I); and (C) an azo or peroxy series catalyst, between a pair of transparent films of plastic material (II) transparent to **IR** and UV light. The monomer compsn. is cured by irradiation with **IR** and visible-UV light with subsequent irradiation only with visible-UV light, the irradiation proceeding for 45 mins. to 3 hours. (I) is adipic acid, (iso)phthalic acid, sebacic acid, epoxy derivatives, and polyester derivatives; and

(II) is polypropylene, polyethylene, polyamide, polyester or polyethylene terephthalate.

USE/ADVANTAGE - Safety glass, e.g. **car windshield** which can be produced at low cost on a large scale and which can also be easily transported and stored.

AN 1986-049961 [08] WPIDS

DNN N1986-036573 DNC C1986-021038

TI Prod'n. of composite coilable ribbon - by polymerising (meth)acrylic monomer mixt. between transparent plastic film, by UV and **IR** radiation.

DC A14 A81 L01 P73

IN MEONI, M

PA (POLI-N) POLIVAR SPA; (POLY-N) POLYBAR SPA; (ITVE) SIV SOC ITAL VETRO SPA

CYC 15

PI EP 172143 A 19860219 (198608)* EN 16p

R: AT BE CH DE FR GB LI LU NL SE

JP 61044740 A 19860304 (198615)

ES 8706527 A 19870916 (198741)

US 4734143 A 19880329 (198816)

EP 172143 B 19881207 (198849) EN

R: AT BE CH DE FR GB LI LU NL SE

DE 3566635 G 19890112 (198904)

IT 1177945 B 19870826 (199034)

CA 1272981 A 19900821 (199039)

JP 04072783 B 19921119 (199251) 6p

ADT EP 172143 A EP 1985-830191 19850724; ES 8706527 A ES 1985-545724 19850730;

US 4734143 A US 1985-758973 19850725; JP 04072783 B JP 1985-168487 19850730

FDT JP 04072783 B Based on JP 61044740

PRAI IT 1984-48672 19840731

=> d L23 abs,bib 1-5

L23 ANSWER (1) OF 5 HCAPLUS COPYRIGHT 2002 ACS

AB Micellar affinity capillary electrophoresis (MACE) was introduced to evaluate the affinity of various kinds of drugs as benzoic acid, salicylic acid, trinitrophenol, p-hydroxybenzoic acid and o-acetylsalicylic acid. Non-ionic micelles as Brij 35 (polyethyleneglycol dodecylether), Tagat (polyoxyethylene (20) glycerol monooleate) and Tween 20 (polyoxyethylene sorbitan monolaurate) were used as a pseudo-stationary phase in capillary electrophoresis. For polyvinyl alc. (PVA) **coated** capillary was used in these exams. The drugs had neg. electrophoretic mobilities at a pH value of pH 7.2. The neg. charged drugs migrated toward the anode and were related by their interaction with the micelles. The difference in the mobility of the drugs owing to the presence of the micelles reflected the interaction between these drugs and the micelles. Equations were derived to calc. the capacity factor k' from the migration times in the presence of micelles t' and in the absence of micelles t , the partition coeffs. Pwm and the Gibbs free energy. The drugs show different interaction and affinity with the micelles in the systems. Strong interaction was obsd. between benzoic acid and the micelles.

Furthermore,

a linear relationship ($R=0.999$) was obtained between ΔG and $\ln Pwm$ in the micellar solubilization of drugs. These results show that ΔG can give us information on the affinity and on the partition behavior of the drugs in these systems.

AN 2001:74880 HCAPLUS

DN 134:331719

TI **Non-ionic micellar** affinity capillary electrophoresis for analysis of interactions between micelles and drugs

AU Mrestani, Y.; Neubert, R. H. H.

CS Institute of Pharmaceutics and Biopharmaceutics, Martin-Luther-University Halle-Wittenberg, Halle/S., D-06120, Germany

SO J. Pharm. Biomed. Anal. (2001), 24(4), 637-643

CODEN: JPBADA; ISSN: 0731-7085

PB Elsevier Science B.V.

DT Journal

LA English

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER (2) OF 5 HCAPLUS COPYRIGHT 2002 ACS

AB The authors compared changes in pH, wall **coating**, and micellar and **non-micellar** surfactant buffer additives in the CE sepn. of synthetic antibody fragments VH(1-68) and VL(1-63). Ion-pairing reagents, such as pentane sulfonic, hexane sulfonic and octane sulfonic acids, were tested for the ability to prevent aggregation of the synthetic peptides.

AN 1996:695826 HCAPLUS

DN 126:4080

TI The use of ion-pairing reagents improves the separation of hydrophobic peptides by capillary electrophoresis

AU Martin, L. M.

CS College Pharmacy, University Rhode Island, Kingston, RI, 02881, USA

SO Pept.: Chem., Struct. Biol., Proc. Am. Pept. Symp., 14th (1996), Meeting Date 1995, 144-145. Editor(s): Kaumaya, Pravin T. P.; Hodges, Robert S.

Publisher: Mayflower Scientific, Kingswinford, UK.
CODEN: 63NTAF

DT Conference
LA English

L23 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2002 ACS

AB The aggregation state of 2,9,16,23-tetracarboxy-zinc-phthalocyanine (ZnTCPC) in aq., **non-aq.** and **micellar** systems was analyzed in correlation to its photochem. behavior. Titanium dioxide (TiO₂) electrodes **coated** with ZnTCPC exhibit photocurrent action spectra similar to the absorption spectra, indicating the presence of different aggregation species. The monochromatic photon-to-current generation efficiency presents its max. value where the presence of monomers is predominant.

AN 1996:106122 HCAPLUS

DN 124:188298

TI The aggregation behavior of zinc-tetracarboxy-phthalocyanine and its spectral sensitization on titanium dioxide **films**

AU Wiederkehr, N. A.

CS Dep. Fis., Univ. Fed. Santa Maria, Santa Maria, 97119-900, Brazil

SO J. Braz. Chem. Soc. (1996), 7(1), 7-13

CODEN: JOCSET; ISSN: 0103-5053

DT Journal

LA English

L23 ANSWER 4 OF 5 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 1999-203911 [17] WPIDS

AB US 5879715 A UPAB: 19990511

NOVELTY - Inorganic nanoparticles precipitated within micellar phases in microemulsions are concentrated by ultrafiltration.

DETAILED DESCRIPTION - Inorganic nanoparticles are produced by a process comprising (i) precipitation within a **non-continuous micellar** phase in a microemulsion comprising the non-continuous phase in a continuous phase, and (ii) ultrafiltration with a semipermeable

membrane having a pore size which retains all of the nanoparticles precipitated in the micellar phase, and permeates the stream of the continuous phase and the micellar phase not containing precipitated nanoparticles, to concentrate the particles for recovery.

An INDEPENDENT CLAIM describes a system to produce the nanoparticles by (i) adding a precipitation agent to a source of inorganic nanoparticles

within a **non-continuous micellar** phase in the microemulsion to precipitate the nanoparticles, (ii) ultrafiltration to concentrate the precipitated particles by retention, and (iii) using recovery means for the particles.

USE - Nanoparticles are used to fabricate structures **coatings** and devices having novel properties due to the fine size of the particles.

ADVANTAGE - In the known process of precipitating nanoparticles from a microemulsion, the use of ultrafiltration provides the possibility of economic, large-scale production compared with current, bench-scale methods using centrifugation and co-solvent extraction/rinsing.

Dwg.2/3

AN 1999-203911 [17] WPIDS

DNC C1999-059253

TI Inorganic nanoparticle microemulsions - precipitated in microemulsion from solution in **non-continuous micellar** phase in continuous phase and are concentrated by ultrafiltration.

DC E37 J04 L03 U11

IN GOLDSMITH, R L; HIGGINS, R J

PA (CERA-N) CERAMEM CORP

CYC 20

PI US 5879715 A 19990309 (199917)* 10p

WO 9911243 A1 19990311 (199917) EN

RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

W: JP

ADT US 5879715 A US 1997-921670 19970902; WO 9911243 A1 WO 1998-US17085 19980818

PRAI US 1997-921670 19970902

L23 ANSWER 5 OF 5 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 1997-226042 [20] WPIDS

AB WO 9712722 A UPAB: 19970516

A metal is worked by: (a) working a metal workpiece at a workstation; (b) providing to the station a recirculating flow of a **non-micellar**, milky white water-in-oil emulsion; (c) collecting the emulsion from the workstation and replenishing the water content by adding water; and (d) recirculating the replenished emulsion to the workstation.

Also claimed is a workstation equipped for such a method comprising: (i) metal working unit; (ii) container (8) of metal working fluid; (iii) means

(21) for supplying make-up water to container (8); and pump (12) for cycling the fluid from the container to unit (i) and back to the container.

USE - The method is of especial use in working ferrous metals, e.g. by rolling. Metal working here includes metal forming operations..

ADVANTAGE - The emulsion can readily be replenished with water and recirculated; unlike some prior emulsions, it does not leave a hydrophilic **coating** on the metal which would not protect the metal against corrosion, like an oily **coating**.

Dwg.1/2

AN 1997-226042 [20] WPIDS

DNN N1997-187010 DNC C1997-072436

TI Working metal using a **non-micellar** milky-white water-in-oil emulsion as working fluid - and recirculating the fluid after

replenishing with water..

DC A97 E12 E17 H08 M21 P51 P56

IN LEEMAN, T J; SCALES, P

PA (BCME) CRODA INT PLC

CYC 19

PI WO 9712722 A1 19970410 (199720)* EN 30p

RW: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE

W: JP US

GB 2305934 A 19970423 (199720) 28p

EP 853526 A1 19980722 (199833) EN

R: DE ES FR GB IT SE

GB 2305934 B 19990818 (199935)

ADT WO 9712722 A1 WO 1996-GB2284 19960918; GB 2305934 A GB 1995-20197
19951003; EP 853526 A1 EP 1996-930290 19960918, WO 1996-GB2284 19960918;
GB 2305934 B GB 1995-20197 19951003
FDT EP 853526 A1 Based on WO 9712722
PRAI GB 1995-20197 19951003

=> d L27 abs, bib 1-20

L27 ANSWER (1) OF 20 HCAPLUS COPYRIGHT 2002 ACS

AB The panel comprises a glass substrate, a transparent elec. conductive **coating** layer supported on the glass substrate, and .gtoreq.1 band of enamel material. The panel is manufd. by: taking a glazing panel having on one of its surfaces a transparent **coating** layer with a transformable portion, and an enamel material assocd. with the transformable portion of the **coating** layer; and causing an interaction between the transformable portion of the **coating** layer and the enamel material by heating the glazing panel to a temp. >300.degree.. The process may further comprises arranging an elec. connector which is elec. connected to the **coating** layer at least partially over the enamel material. Preferably, the **coating** layer is a sputtered, solar control **coating** comprising Ag or Ag alloy **IR reflecting** layer, ZnO anti-reflective layer, and/or Ti barrier layer. The **automobile windshield**, rear window, side window, or sunroof comprising the title panel are also claimed.

AN 2000:351468 HCAPLUS

DN 132:351560

TI Manufacture of automobile glazing panels with **coating** layers

IN Degand, Etienne

PA Glaverbel, Belg.

SO PCT Int. Appl., 14 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000029346	A1	20000525	WO 1999-EP8691	19991105
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE			
EP 1131268	A1	20010912	EP 1999-969215	19991105
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
PRAI EP 1998-203749	A	19981106		
WO 1999-EP8691	W	19991105		

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER (2) OF 20 HCAPLUS COPYRIGHT 2002 ACS

AB A transparent plate, in particular a partition glass, is described which is provided with a **coating** that reflects radiation and at least one window permeable to high-frequency radiation (esp. microwave radiation) provided with a non-**coated** surface. The window is formed inside a limited continuous surface zone of the plate, in which

the

the non-**coated** surface has 25-80% of the the total surface of the plate. The window preferably comprises a pattern of uncoated

parallel

and perpendicular lines that arranged in a pattern.

AN 1999:691338 HCAPLUS

DN 131:287581

TI Transparent automotive plate glass with controlled radiation transparency

IN Maeuser, Helmut; Immerschitt, Stefan

PA Saint-Gobain Vitrage, Fr.

SO PCT Int. Appl., 25 pp.

CODEN: PIXXD2

DT Patent

LA French

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9954961	A1	19991028	WO 1999-FR928	19990420
	W: JP, KR, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	DE 19817712	C1	20000203	DE 1998-19817712	19980421
	EP 990278	A1	20000405	EP 1999-914623	19990420
	R: BE, DE, ES, FR, GB, IT, LU, NL, SE				
	JP 2002506596	T2	20020226	JP 1999-552572	19990420
PRAI	DE 1998-19817712	A	19980421		
	WO 1999-FR928	W	19990420		

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 3 OF 20 HCAPLUS COPYRIGHT 2002 ACS

AB The **film-coated** glass consists of a transparent glass plate **coated** with a transparent hardening **film** prepd. from a compn. contg. (a) an organoalkoxysilane 10-45, (b) a thermosetting resin 2-20, (c) colloidal or ultrafine Al₂O₃ 1-14, (d) a hydrophilic org. solvent 1-70, (e) H₂O 3-60 parts, and optional additives. The conductive glass consists of a transparent glass plate on which have successively been formed a thin elec. conductive **film** and thin plate-like electrodes at controlled intervals and a transparent hardening **film** prepd. from the compn. The **film-coated** glass shows good adhesion and weather, heat, chem., and impact resistance and antistatic properties. The conductive glass shows good antistatic

and

antifogging properties, and shielding of electromagnetic waves and IR light. The conductive glass is suitable for a window, an **automobile windshield**, etc., at high humidity. Thus, a **coating** compn. contg. MeSi(OMe)₃ 22.5, a melamine resin 5, colloidal Al₂O₃ 9, iso-PrOH 35, Butyl Carbitol 4, Me Et ketone 9.5, and water 15 parts was applied on a glass plate **coated** with a Sn oxide **film** and heated to obtain a cured **film-coated** elec. conductive glass with adhesion, hardness, and chem.

and friction resistance.

AN 1997:120905 HCAPLUS

DN 126:132764

TI Cured **film-coated** glass and electrically conductive glass

IN Yoshimura, Koichi; Ichikawa, Yoshio; Matsumoto, Isao; Kaneko, Kiyokazu

PA Tatsuguchi Kogyo Garasu Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 11 PP.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08319135	A2	19961203	JP 1995-149705	19950525

L27 ANSWER 4 OF 20 HCAPLUS COPYRIGHT 2002 ACS

AB **IR-reflective coatings** for automobile windshields are applied to the interior of the windshield to decrease heat loss in winter, to prevent fogging and to prevent distortions as a result of damaged exterior **coatings** from wear by windshield wipers. The **coatings** may be oxides of Fe, Cr, Co, Ti, Al, Sn, Cu, or In and have a thickness .ltoreq.3000 .ANG. and an emissivity .ltoreq.0.40.

AN 1985:426162 HCAPLUS

DN 103:26162

TI Glass panes with a low emissivity, especially for vehicles

IN Colmon, Daniel; Letemps, Bernard; Delpeyroux, Jean Pierre; Fremeaux, Jacques

PA Saint-Gobain Vitrage, Fr.

SO Eur. Pat. Appl., 10 pp.

CODEN: EPXXDW

DT Patent

LA French

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 136208	A1	19850403	EP 1984-401617	19840802
	EP 136208	B1	19890118		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	BR 8403800	A	19850709	BR 1984-3800	19840731
	AT 40081	E	19890215	AT 1984-401617	19840802
	JP 60104411	A2	19850608	JP 1984-162999	19840803
	JP 06098894	B4	19941207		
PRAI	FR 1983-12843		19830804		
	EP 1984-401617		19840802		

L27 ANSWER 5 OF 20 HCAPLUS COPYRIGHT 2002 ACS

AB **Coatings**, which prevent shattering of automobile windscreens upon impact or fracture, comprise interpenetrating networks of crosslinked

polycaprolactone (I)-based polyurethanes and partially crosslinked vinyl acrylic copolymers, with the whole formed in the presence of a controlled quantity of polyester urethane acrylate. Thus, linear I (mol. wt. 1000, OH value 112 mg KOH/g) 35, N-vinyl-2-pyrrolidone 22.3, 2-ethylhexyl acrylate 7, pentaerythritol triacrylate 7, hexanediol diacrylate 3, and

linear urethane-acrylate polyester (2 mol 1,6-hexanediol) 8 parts were reacted with 1.2 mol 2-hydroxyethyl acrylate and 2.2 mol 4,4'-methylenebis(cyclohexyl isocyanate) under reflux and then mixed with 1.5 parts 2-hydroxy-2-methyl-1-phenyl-1-propanone [7473-98-5] photoinitiator and 0.2 part silicone flow-control agent. This mixt. (84 parts) was mixed with 16 parts hexamethylene diisocyanate biuret (26.5% NCO), applied to a **laminated** glass windscreen, and cured by a Hg/quartz arc lamp for 40 s and heated in an **IR** oven at 130.degree. for 7 min to give a **coating** that prevented shattering of the windscreen upon impact after 28 days aging.

AN 1984:632043 HCAPLUS
DN 101:232043
TI Motor vehicle windscreen
IN Sebastiano, Francesco
PA Societa Italiana Vetro SIV S.p.A., Italy
SO Eur. Pat. Appl., 16 pp.
CODEN: EPXXDW

DT Patent
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 117512	A2	19840905	EP 1984-101805	19840221
	EP 117512	A3	19860312		
	EP 117512	B1	19880706		
	R: BE, DE, FR, GB, LU, NL, SE				
	US 4541881	A	19850917	US 1984-577785	19840207
	CA 1211358	A1	19860916	CA 1984-446882	19840207
	JP 59182252	A2	19841017	JP 1984-25276	19840215
	JP 2571355	B2	19970116		
	ES 530008	A1	19851001	ES 1984-530008	19840224
PRAI	IT 1983-19779		19830225		

L27 ANSWER 6 OF 20 HCAPLUS COPYRIGHT 2002 ACS

AB The tensile strength of an adhesive strip for affixing automobile windshields to the frame is improved by use of an ethylene-Et acrylate copolymer (I) [9010-86-0] with a m.p. 95-110.degree.. The strip makes contact with a conductive **coating** on the windshield which heats the strip to 100-120, and then the windshield is pressed into place at .ltoreq.10 kg/cm2 pressure. Heating can also be by **IR** radiation. Thus, a typical thermoplastic strip consists of I 75, maleic anhydride [108-31-6] 5, and carbon black 20 wt.%. .

AN 1984:179194 HCAPLUS

DN 100:179194

TI Thermoplastic material strip for affixing a glass sheet, and a conductive layer using this strip

IN Hochart, Paul

PA Boussois S. A., Fr.

SO Fr. Demande, 14 pp.

CODEN: FRXXBL

DT Patent

LA French

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2531421	A1	19840210	FR 1982-13617	19820804

FR 2531421 B1 19850517
 FR 2517664 A1 19830610 FR 1981-22722 19811204
 FR 2517664 B1 19841130
 EP 81426 A1 19830615 EP 1982-402194 19821201
 R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE
 ES 517902 A1 19840516 ES 1982-517902 19821203
 PRAI FR 1981-22722 19811204
 FR 1982-13617 19820804

L27 ANSWER (7) OF 20 HCAPLUS COPYRIGHT 2002 ACS

AB A plate glass was **coated** by vacuum deposition with 350 .ANG. WO3, 350 .ANG. Ag, and then 100 .ANG. WO3, overlaid with a 15 mm poly(vinyl butyral) sheet and then a plate glass, and hot-pressed to give an automobile window glass with visible light transmittance 75%, visible light reflectance 19%, sunlight transmittance 55%, and IR reflectance 75%.

AN 1980:624625 HCAPLUS

DN 93:224625

TI Heat ray-reflecting glass for automobiles

PA Asahi Glass Co., Ltd., Japan; Honda Motor Co., Ltd.

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 55067547	A2	19800521	JP 1978-137808	19781110

L27 ANSWER (8) OF 20 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 2002-085275 [12] WPIDS

AB JP2001174626 A UPAB: 20020221

NOVELTY - A near **infrared** radiation-absorbing layer, containing a near **infrared** radiation absorber consisting of a diimonium-based compound and a copper polysulfide complex, is formed on the surface of a transparent base material **film**.

DETAILED DESCRIPTION - The near **infrared** radiation-absorbing layer contains a near **infrared** radiation absorber consisting of a diimonium-based compound, and a copper complex of

formula (I) and/or a copper compound of formula (II).

USE - The near **infrared** radiation-absorbing **film** is used for a plasma display, or automobile window shield.

ADVANTAGE - The near **infrared** radiation-absorbing **film** has dramatically superior heat resistance, humidity resistance, and ultraviolet ray resistance, and has no decrease in near **infrared** radiation absorption performance for a long period of time.

Dwg.0/1

AN 2002-085275 [12] WPIDS

DNN N2002-063408 DNC C2002-026032

TI Near **infrared** radiation-absorbing **film** for plasma display and **automobile windshield** has near **infrared** radiation-absorbing layer containing near **infrared** radiation absorber comprising diimonium-based compound and copper polysulfide complex.

DC A89 E19 L03 P81 V05

PA (BRID) BRIDGESTONE CORP

CYC 1

PI JP 2001174626 A 20010629 (200212)* 7p

ADT JP 2001174626 A JP 1999-354717 19991214

PRAI JP 1999-354717 19991214

L27 ANSWER (9) OF 20 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 2001-093730 [11] WPIDS

AB EP 1060876 A UPAB: 20010224

NOVELTY - The glazing includes at least two glass pieces joined by a thermoplastic layer and a solar protection layer which reflects radiation outside the visible spectrum of solar radiation, especially infrared rays. A transparent, low-emission layer that reflects thermal radiation is located more towards the interior than the solar protection layer.

DETAILED DESCRIPTION - The thermal radiation reflecting layer is a layer of doped metal oxide, especially fluorine-doped tin oxide, preferably deposited by pyrolysis, and has at least one sublayer and/or

at

least one over-layer, and especially a mechanically resistant protection layer.

The solar protection layer comprises a stack of layers including at least one metal layer incorporated between two layers of metal oxide or nitride, e.g. AlN or Si₃N₄, in particular at least one silver-based

layer.

An INDEPENDENT CLAIM is given for use of the glazing as a **windscreen**, a side window, a rear window or roof of a **car** vehicle.

USE - **Windscreen**, side window, rear window or roof of a **car** vehicle.

ADVANTAGE - The glazing possesses both solar protection and thermal insulating functions.

Dwg.0/0

AN 2001-093730 [11] WPIDS

DNN N2001-071106 DNC C2001-027807

TI Transparent **laminated** glazing for cars that reflects solar and thermal rays comprises at least two glass pieces joined by a thermoplastic

layer and a solar protection layer.

DC A95 L01 P73 Q12

IN KRAEMLING, F; KRAEMLING, F

PA (COMP) SEKURIT SAINT GOBAIN DEUT GMBH & CO KG; (COMP) SAINT-GOBAIN

VITRAGE

CYC 29

PI EP 1060876 A2 20001220 (200111)* FR 5p

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI

DE 19927683 C1 20010125 (200111)

JP 2001039742 A 20010213 (200112)

14p

BR 2000002698 A 20010313 (200118)

CZ 2000002293 A3 20010411 (200130)

KR 2001069207 A 20010723 (200203)

ADT EP 1060876 A2 EP 2000-401676 20000614; DE 19927683 C1 DE 1999-19927683
19990617; JP 2001039742 A JP 2000-179434 20000615; BR 2000002698 A BR
2000-2698 20000619; CZ 2000002293 A3 CZ 2000-2293 20000619; KR 2001069207

A KR 2000-33367 20000616
PRAI DE 1999-19927683 19990617

L27 ANSWER 10 OF 20 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 2001-032303 [04] WPIDS

AB WO 200076930 A UPAB: 20010118

NOVELTY - The article comprises a substrate having a first dielectric layer containing zinc stannate, an **infrared** reflective layer, a metal primer layer, a second dielectric layer and protective layer having metal and/or silicon containing **films**.

DETAILED DESCRIPTION - An **infrared** reflective **coated** article comprises:

- (A) a substrate;
- (B) a dielectric layer sputtered over the substrate, having
 - (a) a first zinc stannate **film** containing (wt.%) 10 at least Zn at least 90 and 10 at least Sn at least 90, and
 - (b) an electrical enhancing **film** selected from ZnO, SnO and a second zinc stannate **film** (where the first zinc stannate **film** is at least 5 wt.% different from the second);
- (C) an **infrared** reflective layer;
- (D) a metal primer layer;
- (E) a second dielectric layer; and
- (F) a protective layer having at least two **films** selected from metal and/or silicon containing **films**, e.g. metal and/or silicon, and metal oxy and/or silicon oxy materials, where the oxy materials are selected from oxides or oxynitrides, and the metal is selected from one or more transition metals of group 4, 5, 6 or 10.

An INDEPENDENT CLAIM is also included for a method of making a transparent article for an automobile, which comprises:

- (I) applying a **coating** as above to a glass substrate;
- (II) processing the **coated** substrate to form a **coated** windscreen blank, by heating it to its bending temperature, where after heating, the **coating** has reduced haze; and
- (III) **laminating** the **coated** blank to another piece of glass.

USE - For an **infrared** reflective **coated** automobile windscreen.

ADVANTAGE - The **coatings** have good mechanical and chemical durability, making them suitable for shipping and heat treating with reduced haze.

Dwg.0/0

AN 2001-032303 [04] WPIDS

DNC C2001-009959

TI **Infrared** reflective **coated** automobile

windscreen, comprises substrate, first zinc stannate dielectric layer, **infrared** reflective layer, metal primer layer, second dielectric layer and protective layer.

DC L01 M13

IN O'SHAUGHNESSY, D J

PA (PITT) PPG IND OHIO INC

CYC 90

PI WO 2000076930 A1 20001221 (200104)* EN 43p

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TZ UG ZW

W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES
FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS

LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL
TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2000054673 A 20010102 (200121)
ADT WO 2000076930 A1 WO 2000-US15576 20000606; AU 2000054673 A AU 2000-54673
20000606
FDT AU 2000054673 A Based on WO 200076930
PRAI US 1999-334193 19990616

L27 ANSWER (11) OF 20 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2000-442607 [38] WPIDS
CR 2000-442608 [38]
AB WO 200037376 A UPAB: 20020226

NOVELTY - A **coated** glass article has an exterior surface bearing a low emissivity water-sheeting **coating**. The **coating** includes a pyrolytically applied dielectric first layer and an exterior layer of silica sputtered on the first layer.

DETAILED DESCRIPTION - The **coated** glass article has an exterior surface bearing a low emissivity water-sheeting **coating**. The **coating** comprises a first pyrolytically applied dielectric layer on the exterior surface and an exterior layer of silica sputtered

on

top of the first layer. The low-emissivity **coating** reduces the contact angle of water on the **coated** exterior surface below 25 deg. and causes water applied to the **coated** exterior surface to sheet.

INDEPENDENT CLAIMS are also included for:

- (1) an **automobile windscreen** comprising
 - (a) an outer pane of glass having an exterior surface and a first bonded surface,
 - (b) an inner pane of glass having an interior surface and a second bonded surface,
 - (c) a tear-resistant polymeric layer between the two bonded surfaces,
- and
- (d) the low emissivity water-sheeting **coating**;
- (2) a method of rendering a surface of a pane of glass resistant to soiling and staining, comprising
 - (i) providing a sheet of glass having clean interior and exterior surfaces, the exterior surface bears pyrolytically applied dielectric layer having a contact angle with water of at least 30 deg. ,
 - (ii) **coating** the interior surface with a reflective metal layer(s), and second dielectric layer(s), and
 - (iii) **coating** the exterior surface of the glass with a water-sheeting **coating** by sputtering silica directly onto the outer surface of the applied dielectric layer yielding a low-emissivity water sheeting **coating** with a contact angle with water below 25 deg. which causes water on the **coated** surface of the pane to sheet.

USE - For use in insulated glass units.

ADVANTAGE - Has a glass pane surface that is resistant to soiling and staining.

Dwg.0/5
AN 2000-442607 [38] WPIDS
CR 2000-442608 [38]

DNC C2000-134691

TI **Coated** glass article for insulated glass units, has an exterior surface with low emissivity water sheeting **coating**.

DC L01 P73

IN BOND, B; HARTIG, K; KRISKO, A; PFAFF, G; STANEK, R; KRISKO, A J

PA (CARD-N) CARDINAL IG CO

CYC 85

PI WO 2000037376 A1 20000629 (200038)* EN 42p

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
OA PT SD SE SL SZ UG ZWW: AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK EE ES FI GB
GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV
MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT
UA UG US UZ VN YU ZW

AU 9954692 A 20000712 (200048)

JP 2001002450 A 20010109 (200107) 58p

NO 2001003034 A 20010820 (200157)

EP 1144328 A1 20011017 (200169) EN

R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

GB 2363131 A 20011212 (200205)

GB 2364068 A 20020116 (200213)

ADT WO 2000037376 A1 WO 1999-US17876 19990806; AU 9954692 A AU 1999-54692

19990806; JP 2001002450 A JP 2000-137148 20000501; NO 2001003034 A WO

1999-US17876 19990806, NO 2001-3034 20010619; EP 1144328 A1 EP

1999-940937

19990806, WO 1999-US17876 19990806; GB 2363131 A Derived from GB

2001-16268 20010703, GB 2001-22692 20010920; GB 2364068 A Derived from GB

2001-16268 19990202, GB 2001-22691 20010920

FDT AU 9954692 A Based on WO 200037376; EP 1144328 A1 Based on WO 200037376

PRAI US 1999-134705P 19990518; US 1998-113259P 19981221; WO 1999-US2208

19990202

L27 ANSWER 12 OF 20 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 2000-441681 [38] WPIDS

AB WO 200029346 A UPAB: 20000811

NOVELTY - A glazing panel (10) is manufactured by: (a) taking the panel having on one of its surfaces (i) transparent **coating** layer (13) having a transformable portion (15), and (ii) an enamel (16) material associated with the transformable portion; and (b) causing an interaction between the transformable portion of the **coating** layer and the enamel material by heating the panel to above 300 deg. C.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(a) use of the method to reduce edge corrosion of the **coating** layer;

(b) an automotive vehicle windscreen, rear window, side window or sunroof comprising the glazing panel; and

(c) glazing panel comprising a glass substrate, a transparent electrically conductive **coating** layer supported on the substrate and band(s) of enamel material comprising traces of the **coating** layer resulting from an interaction between the enamel and the **coating** layer, so that the band(s) of enamel material provides a discontinuity in the electrical conductivity of the **coating** layer.

USE - The glazing panel is used to form one sheet of a **laminated car windscreen**. It is also used to

reduce edge corrosion of the **coating** layer (claimed).

ADVANTAGE - The method renders the transformable portion non-conductive, preferably without rendering other portions of the **coating** layer non-conductive, and/or renders the transformable portion of the **coating** layer less susceptible to corrosion.

DESCRIPTION OF DRAWING(S) - The figure shows a section of an edge portion of the glazing panel.

Glazing panel 10

Coating layer 13

Transformable portion 15

Enamel 16

Dwg.2/4

AN 2000-441681 [38] WPIDS,

DNN N2000-329627 DNC C2000-134077

TI Manufacture of a glazing panel used to form one sheet of a **laminated car windscreen**, involves causing interaction of a transformable portion of the **coating** layer and the associated enamel material by heating.

DC L01 M13 X22 X25

IN DEGAND, E

PA (GLAV) GLAVERBEL SA; (GLAV) GLAVERBEL

CYC 85

PI WO 2000029346 A1 20000525 (200038)* EN 14p

RW: AT BE CH CY DE DK EA ES FI FR GB GR IE IT LU MC NL PT SE

W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB

GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU

LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR

TT UA UG US UZ VN YU ZA ZW

AU 2000027948 A 20000605 (200042)

EP 1131268 A1 20010912 (200155) EN

R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

ADT WO 2000029346 A1 WO 1999-EP8691 19991105; AU 2000027948 A AU 2000-27948 19991105; EP 1131268 A1 EP 1999-969215 19991105, WO 1999-EP8691 19991105

FDT AU 2000027948 A Based on WO 200029346; EP 1131268 A1 Based on WO 200029346

PRAI EP 1998-203749 19981106

L27 ANSWER 13 OF 20 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 2000-351804 [31] WPIDS

AB DE 19928235 A UPAB: 20000630

NOVELTY - A spectral selective **coating** comprising (a) a binder of transmission preferably exceeding 75% in the of 0.7-2.5 micron near **infrared**, (b) a first pigment which selectively absorbs light within the range 0.35-0.7 micron thermal **infrared** wavelength, and (c) a second pigment which scatters and/or reflects light within the 2.5-50 micron thermal infrared wavelength range is new.

DETAILED DESCRIPTION - A spectral selective **coating** comprising (a) a binder of transmission exceeding 60, preferably exceeding

75% in the 0.7-2.5 micron near **infrared**, and transmission exceeding 40, preferably 50 % in the 2.5-50 micron and at least 5-35 micron thermal **infrared** range,; (b) a first pigment which selectively absorbs 40, preferably 60% of visible light within the 0.35-0.7 micron thermal **infrared** wavelength range, shows more than 40, preferably more than 50% scattering in the 0.7-2.5 micron near **infrared** range, and 40, preferably 50% transmission in the region

2.5-50 micron thermal **infrared**, and (c) a second pigment which scatters and/or reflects 40, preferably 50% light in the range 2.5-50 micron, or at least 5-25 micron thermal **infrared** wavelength range.

USE - The **coating** is useful for application to the windscreens of new automobiles.

ADVANTAGE - The **coating** prevents mirror effects inside the automobile, decreases thermal emission, and absorbs a decreased amount of solar energy.

Dwg.1/3

AN 2000-351804 [31] WPIDS

DNC C2000-107262

TI Spectral selective **coating** useful for treating automobile windscreens comprising a binder, a first pigment and a second pigment, prevents mirror effects inside the automobile.

DC A18 A28 A82 G02

IN HUGO, G

PA (HUGO-I) HUGO G

CYC 25

PI DE 19928235 A1 20000427 (200031)* 7p

WO 2000024833 A1 20000504 (200031) DE

RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

W: BR CN JP KR RU US

BR 9914817 A 20010710 (200142)

EP 1137722 A1 20011004 (200158) DE

R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

ADT DE 19928235 A1 DE 1999-19928235 19990621; WO 2000024833 A1 WO 1999-EP8059 19991025; BR 9914817 A BR 1999-14817 19991025, WO 1999-EP8059 19991025;

EP

1137722 A1 EP 1999-971016 19991025, WO 1999-EP8059 19991025

FDT BR 9914817 A Based on WO 200024833; EP 1137722 A1 Based on WO 200024833

PRAI DE 1998-19849313 19981026

L27 ANSWER 14 OF 20 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 2000-023844 [02] WPIDS

AB WO 9958736 A UPAB: 20000112

NOVELTY - The sputter cathode target consists of zinc and tin. More than 90 % to less than 100 % of cathode's weight consists of zinc. The rest of cathode's weight consists of tin.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for the method of making an automobile transparency using sputter cathode for sputtering.

USE - For depositing **coating** on substrate of glass, fiber glass, plastic, metal, wood or ceramic to form **IR reflective coated** article for solar control automotive windshields, transparency for residential and commercial buildings, and land, air, space on or below water vehicles etc.

ADVANTAGE - By reducing the tin 's quantity on sputter cathode, the **infrared** reflecting layer formed by sputtering has improved chemical durability of high transmittance and low emissivity **coating**.

Dwg.0/0

AN 2000-023844 [02] WPIDS

DNC C2000-005993

TI Zinc cathode sputtering target for forming **infrared** reflecting **coated** article e.g. for **automobile windshield**.

DC M13
 IN FINLEY, J J; MEDWICK, P A; O'SHAUGHNESSY, D J
 PA (PITT) PPG IND OHIO INC
 CYC 84
 PI WO 9958736 A2 19991118 (200002)* EN 35p
 RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
 OA PT SD SE SL SZ UG ZW
 W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD
 GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV
 MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT
 UA UG UZ VN YU ZW
 AU 9939726 A 19991129 (200018)
 EP 1080245 A2 20010307 (200114) EN
 R: AT BE CH CY DE DK ES FR GB GR IT LI LU NL PT SE
 CN 1300327 A 20010620 (200159)
 KR 2001043456 A 20010525 (200168)
 MX 2000010750 A1 20010401 (200171)
 AU 2001079441 A 20020110 (200213)#
 ADT WO 9958736 A2 WO 1999-US9890 19990506; AU 9939726 A AU 1999-39726
 19990506; EP 1080245 A2 EP 1999-922817 19990506, WO 1999-US9890 19990506;
 CN 1300327 A CN 1999-805969 19990506; KR 2001043456 A KR 2000-712503
 20001108; MX 2000010750 A1 MX 2000-10750 20001101; AU 2001079441 A Div ex
 AU 1999-39726 19990506, AU 2001-79441 20011017
 FDT AU 9939726 A Based on WO 9958736; EP 1080245 A2 Based on WO 9958736
 PRAI US 1999-302409 19990430; US 1998-84720P 19980508; US 1998-85129P
 19980512; AU 2001-79441 20011017

L27 ANSWER (15) OF 20 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
 AN 1994-201414 [25] WPIDS
 AB DE 4316575 C UPAB: 19940928

Car windscreens are produced by screen printing a decorative edge pigment (2). This **coating** is dried and fired at a high temp.. Before bending the glass, a further strip (3) containing Ag is screen printed onto the decorative edge (2). After hardening this strip by **IR** radiation, the pane is heat treated at about 600 deg.C to drive off the volatile printing oil. The pane is then placed on a second pane with the printed surface facing the second pane and the two panes are bent together.

ADVANTAGE - The Ag-based strip prevents the two panes sticking together, thereby improving the efficiency of the bending process.
 Dwg.1,2/2

ABEQ US 5451280 A UPAB: 19951102

Prodn. of a glazing of curved **laminated** glass comprising two individual glass sheets and one interposed thermoplastic sheet which connects the two glass sheets together, comprises: applying a decorative **coating** of a baking ink by printing onto the peripheral marginal surface of a first glass sheet, on the side of the glass sheet which is

to

come into contact with the interposed thermoplastic sheet, and then hardening or drying the applied **coating**; applying a baking ink contg. metallic silver along the surface of the dried decorative **coating** and substantially over its entire length, which during subsequent bending, prevents any contact between the decorative **coating** and a second glass sheet which is later placed in contact with the **coated** first glass sheet; baking the first glass sheet bearing the decorative **coating** at a higher temp. than the temp.

of the drying or hardening step; superimposing the glass sheets with the baked decorative **coating** between the glass sheets; bending the combined glass sheets to the desired curved shape over a block; separating

the bent combined glass sheets; and **laminating** the glass sheets in pair wise mating fashion through the intermediate thermoplastic sheet positioned between the two glass sheets under heat and pressure.

USE - The process yields a curved **laminated** glazing esp. a car glazing.

Dwg.0/2

AN 1994-201414 [25] WPIDS

DNN N1994-201388 DNC C1994-116884

TI **Car windscreen** production - with silver -contg. strip produced on one glass pane to prevent it sticking to another pane during the bending process.

DC L01 M13 P73 Q12

IN GILLNER, M

PA (COMP) VEGLA VER GLASWERKE GMBH; (COMP) SAINT-GOBAIN VITRAGE INT; (COMP) SAINT-GOBAIN VITRAGE

CYC 13

PI DE 4316575 C1 19940707 (199425)* 3p

EP 625422 A1 19941123 (199445) FR

R: BE DE ES FR GB IT LU NL PT SE

FI 9402286 A 19941119 (199508)

JP 07048151 A 19950221 (199517) 5p

US 5451280 A 19950919 (199543) 6p

EP 625422 B1 19981104 (199848) FR

R: BE DE ES FR GB IT LU NL PT SE

DE 69414300 E 19981210 (199904)

ADT DE 4316575 C1 DE 1993-4316575 19930518; EP 625422 A1 EP 1994-401031

19940510; FI 9402286 A FI 1994-2286 19940517; JP 07048151 A JP

1994-102757

19940517; US 5451280 A US 1994-245036 19940517; EP 625422 B1 EP

1994-401031 19940510; DE 69414300 E DE 1994-614300 19940510, EP

1994-401031 19940510

FDT DE 69414300 E Based on EP 625422

PRAI DE 1993-4316575 19930518

L27 ANSWER ⁽¹⁶⁾ OF 20 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 1993-322057 [41] WPIDS

AB EP 564709 A UPAB: 19931130

Layered, transparent substrate (I) is claimed, on one side of which a multi-layered transparent layer system is applied with at least one layer of oxynitrides of Hf, Zr, Ta, or Ti to form a transparent element.

Also claimed are: (i) prodn. of at least one layer on a work piece using a reactive deposition process; (ii) prodn. of **coating** a workpiece with two layers of different materials; (iii) appts. for carrying out (i) and (ii); and (iv) HfON having a refractive index of 2.6-2.8, an extinction coefficient (k) at not more than 0.02, pref. not more than 0.01 at 400 (pref. 400-100) nm.

USE/ADVANTAGE - The substrate can be used esp. on car windscreens (claimed). It has good optical properties.

Dwg.2/12

ABEQ US 5464683 A UPAB: 19951215

Coated transparent substrate has, on at least one of its sides, a multi-layer system comprising a sequence of a Hf oxynitride layers and

Si oxide layers in a layer thickness succession of HfON 8 nm; SiO₂ 42 nm; HfON 103 nm; SiO₂ 193 nm; HfON 98 nm; SiO₂ Hf is evaporated and reacted with and O₂/N₂ mixture Hf may be replaced by Zr, Ta and T. Oxynitrides, partic of Hf have an especially high refractive index in the visible and near-visible **infrared** spectral ranges.

USE - Reduced sun energy transmittance, anti-reflective, wear resistance.

Dwg.0/12

ABEQ US 5473468 A UPAB: 19960122

A **coated** wear resistant and transparent substrate comprising a multi-layer system with at least one layer of an oxynitride of one of hafnium, zirconium, tantalum and titanium, and with no metal layer, the substrate with multi-layer system having a reduced sun energy transmittance and reduced anti-reflective effect in the visual spectral range.

Dwg.0/12

ABEQ EP 564709 B UPAB: 19960305

Coated transparent substrate characterised in that an at least two-layer transparent metal-layer-free **coating** system is applied at least to one substrate side with at least one layer of the oxynitride of hafnium, zirconium, tantalum or titanium to reduce the solar radiation transmission (Tsun) and to reduce the reflection (Rvis) of visible light.

Dwg.1/12

AN 1993-322057 [41] WPIDS

DNN N1993-248178 DNC C1993-143202

TI Layered transparent substrate used on **car windscreen** - having multilayered transparent layer system on one side with oxynitride layer of hafnium, zirconium, tantalum, etc..

DC L01 M13 P81

IN RUDIGIER, H; SPERGER, R

PA (BALV) BALZERS AG

CYC 8

PI EP 564709 A1 19931013 (199341)* DE 29p

R: CH DE FR GB IT LI

JP 05254887 A 19931005 (199344) 15p

US 5464683 A 19951107 (199550) 20p

US 5473468 A 19951205 (199603) 21p

EP 564709 B1 19960124 (199609) DE 34p

R: CH DE FR GB IT LI

DE 59205177 G 19960307 (199615)

ADT EP 564709 A1 EP 1992-120619 19921203; JP 05254887 A JP 1992-332794

19921214; US 5464683 A US 1992-986365 19921207; US 5473468 A Div ex US

1992-986365 19921207, US 1994-252576 19940601; EP 564709 B1 EP

1992-120619

19921203; DE 59205177 G DE 1992-505177 19921203, EP 1992-120619 19921203

FDT DE 59205177 G Based on EP 564709

PRAI CH 1991-3700 19911213

L27 ANSWER **(7)** OF 20 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 1992-238213 [29] WPIDS

AB JP 04160037 A UPAB: 19931006

Cutting UV and **IR** radiations involves **coating** the windscreen of cars with a resin compsn. capable of forming a thin **film** and then drying the **coated** compsn.. The compsn. comprises an organic UV absorber, an organic **IR** absorber, a resin capable of forming a thin **film**, and a solvent.

Pref. compsn. comprises 1.0-10.0 wt.% of benzophenone cpd. of formula

(I) as the UV absorber: R1 = a 1-12C alkyl or H; R2-R4 = H, -OH, OCH3, -SO3H.3H2O. The compsn. pref. comprises 0.05-10.0 wt.% of an amino cpd. of

formula (II) as the IR absorber: R = a 1-12C alkyl gp. or H; X = SbF6, BF4, ClO3, NO3, Cl, Br; n = 1 or 2.

USE/ADVANTAGE - Prevents undesirable sun tanning and burning inside the car by penetration of harmful UV rays.
0/0

AN 1992-238213 [29] WPIDS

TI Cutting UV and IR radiation transmission of car windscreens - by **coating** with compsn. contg. organic UV absorber, IR absorber, thin **film** forming resin and solvent.

DC A60 A82 E14 G02 L01

PA (JCAR) JAPAN CARLIT CO LTD; (TOYT) TOYOTA JIDOSHA KK

CYC 1

PI JP 04160037 A 19920603 (199229)* 6p

ADT JP 04160037 A JP 1990-253714 19901024

PRAI JP 1990-253714 19901024

L27 ANSWER 18 OF 20 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 1989-201505 [28] WPIDS

AB JP 01138541 A UPAB: 19930923

A pair of transparent glass panels sandwich a layer of light adjusting resin, which consists of a mixt. of a polybutyral resin, epoxy resin and

a

photochromic substance, pref. also contg. an UV absorber, an IR absorber, and/or an antioxidant.

Specifically the light adjusting resin formation is dissolved in a mixed solvents of ethanol, butanol and methylethyl ketone and spread over a flat plate to obtain a **film**, which is sandwiched.

ADVANTAGE - Rapid responses to the light intensity, requiring no driving power source. The colour change of the resin layer is reversible and the range of use temp. is wide. Useful for **automobile** sun roof or **windshield** and for mirrors.

0/3

AN 1989-201505 [28] WPIDS

DNN N1989-153849 DNC C1989-089284

TI Light adjusting **lamine** glass for car sunroof, etc. - comprising glass panels sandwiching mixt. of poly butyral resin, epoxy resin and photochromic substance.

DC A14 A21 A89 L01 P73 P81 Q48

PA (NPDE) NIPPONDENSO CO LTD

CYC 1

PI JP 01138541 A 19890531 (198928)* 6p

ADT JP 01138541 A JP 1987-298005 19871126

PRAI JP 1987-298005 19871126

L27 ANSWER 19 OF 20 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 1986-049961 [08] WPIDS

AB EP 172143 A UPAB: 19930922

A composite ribbon, which can be wound as a coil, consists of (a) an elastomeric, transparent, intermediate **film** of acrylate resin, 0.4-2 mm thick, as intermediate **film** for safety **laminated** glass panels, and (b) 2 external **films** of

plastic resin, transparent to visible UV and **IR** light, inert to the polymerisation reaction for forming the acrylate resin, and less than 50 microns thick, and is made by (1) continuously laying down a polymerisable mixt. of (meth)acrylic or vinylic monomers, on one of the external **films** and applying the 2nd external **film**, (2) polymerising the mixt. to an acrylate resin by a 1st irradiation with light in the visible UV and **IR** range, with the UV forming not more than 10% of the total radiation, and by a 2nd irradiation with **IR** radiation for a total of 45 mins.-3 h., and (3) winding the composite ribbon into a coil.

USE/ADVANTAGE - Prodn. is continuous. Self-bonding during prodn. is prevented. A safety **laminated** glass panel, with an intermediate 0.4-2 mm layer of an acrylate resin, as obtd. from the composite ribbon, is claimed.

0/1

ABEQ EP 172143 B UPAB: 19930922

A process for the manufacture of a continuous composite ribbon consisting of an intermediate **film** and two external **films** of a plastic resin, that may be wound as a coil, characterised by the steps of;

laying down in a continuous way a polymerisable mixture of monomers selected from the class consisting of acrylic, methacrylic, and vinylic monomers, on the one of two external **films**; applying in a continuous way the second external **film** upon said mixture; polymerising said mixture to an acrylate resin by means of a first irradiation with light radiations in the range of visible ultraviolet and of **infrared** spectrum, wherein the radiation in the visible ultraviolet spectrum constitutes not more than 10% of the total irradiation, and by means of a second irradiation with light radiation in the range of **infrared** spectrum for a total period of time ranging from 45 minutes to 3 hours, so as to obtain a composite ribbon consisting of an elastomeric, transparent, intermediate **film** formed of acrylate resin, having a thickness from 0.4 to 2 millimeters,

to

be used as an intermediate layer for safety **laminated** glass panels and of two external **films** of a plastic resin, transparent to visible ultraviolet light and to **infrared** light, which is inert to a polymerisation reaction for forming said acrylate resin,

having

a thickness lower than 50 micrometres, and winding the so obtained composite ribbon into a coil.

ABEQ US 4734143 A UPAB: 19930922

Prodn. of safety glass, by polymerising as a continuous ribbon, a mixt. of

(A) 1 pt.wt. of a compsn. of polymerisable monomers including 60-97 pts.wt. (meth)acrylic ester, 0-2 pts.wt. (meth)acrylic acid, 0-5 pts.wt. N-2-vinylpyrrolidone, 0-5 pts.wt. (meth)acrylic acid ester including glycidyl gps.; (B) 0.16-1.2 pts.wt. of a plasticiser (I); and (C) an azo or peroxy series catalyst, between a pair of transparent **films** of plastic material (II) transparent to **IR** and UV light. The monomer compsn. is cured by irradiation with **IR** and visible-UV light with subsequent irradiation only with visible-UV light, the irradiation proceeding for 45 mins. to 3 hours. (I) is adipic acid, (iso)phthalic acid, sebacic acid, epoxy derivatives, and polyester derivatives; and (II) is polypropylene, polyethylene, polyamide,

polyester

or polyethylene terephthalate.

USE/ADVANTAGE - Safety glass, e.g. **car windshield**

which can be produced at low cost on a large scale and which can also be easily transported and stored.

AN 1986-049961 [08] WPIDS

DNN N1986-036573 DNC C1986-021038

TI Prodn. of composite coilable ribbon - by polymerising (meth)acrylic monomer mixt. between transparent plastic **film**, by UV and IR radiation.

DC A14 A81 L01 P73

IN MEONI, M

PA (POLI-N) POLIVAR SPA; (POLY-N) POLYBAR SPA; (ITVE) SIV SOC ITAL VETRO SPA

CYC 15

PI EP 172143 A 19860219 (198608)* EN 16p

R: AT BE CH DE FR GB LI LU NL SE

JP 61044740 A 19860304 (198615)

ES 8706527 A 19870916 (198741)

US 4734143 A 19880329 (198816)

EP 172143 B 19881207 (198849) EN

R: AT BE CH DE FR GB LI LU NL SE

DE 3566635 G 19890112 (198904)

IT 1177945 B 19870826 (199034)

CA 1272981 A 19900821 (199039)

JP 04072783 B 19921119 (199251) 6p

ADT EP 172143 A EP 1985-830191 19850724; ES 8706527 A ES 1985-545724. 19850730;

US 4734143 A US 1985-758973 19850725; JP 04072783 B JP 1985-168487 19850730

FDT JP 04072783 B Based on JP 61044740

PRAI IT 1984-48672 19840731

L27 ANSWER (20) OF 20 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 1984-078683 [13] WPIDS

AB JP 59030726 A UPAB: 19930925

A paste-like coloured ceramic is applied on to the surface before **coating** on heat-absorbing material. The heat-absorbing material is dried, followed by heating the glass to cause baking of the ceramic. Subsequently rapid cooling is carried out.

The ceramic is e.g. prepared by thoroughly mixing together low melting glass composed mainly of PbO and SiO₂ etc., inorganic pigment and solvent so as to form paste. The heat-absorbing material is e.g. prepared by thoroughly mixing together Si-coated diatomaceous earth powder, starch paste and water. The heat-absorbing material is capable of reflecting infrared rays, being not reached with the ceramic colour and the glass panel, and is washed-off after baking.

Reinforcement of the glass board and baking of the ceramic are carried out simultaneously. Good size accuracy and low stress is obtd. 0/3

AN 1984-078683 [13] WPIDS

DNC C1984-033685

TI Reinforced glass panel e.g. **car windscreen** - has light intercepting ceramic mask applied to upper portion.

DC L01

PA (NIPG) NIPPON SHEET GLASS CO LTD

CYC 1

PI JP 59030726 A 19840218 (198413)* 3p

JP 02054284 B 19901121 (199050)
ADT JP 59030726 A JP 1982-140281 19820812; JP 02054284 B JP 1982-140281
19820812
PRAI JP 1982-140281 19820812

=> d L28 abs, ibib 1-5

L28 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2002 ACS
AB A review, with no refs., of glasses and their thermal properties for maintaining the thermal comfort for driver and passengers in cars including body-tinned, **coated**, and insulated glasses for windshields. The use of these glasses with respect to the legal light transmittance limits is discussed.
ACCESSION NUMBER: 1994:277640 HCAPLUS
DOCUMENT NUMBER: 120:277640
TITLE: Protection against heat, radiation and glare. New developments in automotive glazings
AUTHOR(S): Weigt, Paul; Schrey, Helmut
CORPORATE SOURCE: Flachglas A.-G., Gelsenkirchen, Germany
SOURCE: Glass Sci. Technol. (Frankfurt/Main) (1994), 67(1), 21-7
CODEN: GSTEEX
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

L28 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2002 ACS
AB Windshields are manufd. by sputtering metal **films** (12-35 nm) on transparent substrates and then applying pigmented **films** (1-60 .mu.m) by electrodeposition. A PMMA sheet was **coated** with a polyurethane, sputtered with a 15-nm **film** of Ni-Cr alloy, and **coated** with an acrylic resin contg. 0.1% carbon black and 0.8% acridine orange R to give a windshield with good **thermal insulation** and reflection ratio for visible light.
ACCESSION NUMBER: 1989:635247 HCAPLUS
DOCUMENT NUMBER: 111:235247
TITLE: Manufacture of automobile windshields
INVENTOR(S): Funahashi, Riichi; Ito, Toshasu; Hayakawa, Fujio
PATENT ASSIGNEE(S): Toyoda Gosei Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01192540	A2	19890802	JP 1988-16628	19880127

L28 ANSWER 3 OF 9 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2001-093730 [11] WPIDS
AB EP 1060876 A UPAB: 20010224
NOVELTY - The glazing includes at least two glass pieces joined by a thermoplastic layer and a solar protection layer which reflects radiation outside the visible spectrum of solar radiation, especially infrared rays.

A transparent, low-emission layer that reflects thermal radiation is located more towards the interior than the solar protection layer.

DETAILED DESCRIPTION - The thermal radiation reflecting layer is a layer of doped metal oxide, especially fluorine-doped tin oxide, preferably deposited by pyrolysis, and has at least one sublayer and/or

at

least one over-layer, and especially a mechanically resistant protection layer.

The solar protection layer comprises a stack of layers including at least one metal layer incorporated between two layers of metal oxide or nitride, e.g. AlN or Si₃N₄, in particular at least one silver-based layer.

An INDEPENDENT CLAIM is given for use of the glazing as a **windscreen**, a side window, a rear window or roof of a **car** vehicle.

USE - **Windscreen**, side window, rear window or roof of a **car** vehicle.

ADVANTAGE - The glazing possesses both solar protection and **thermal insulating** functions.

Dwg.0/0

ACCESSION NUMBER: 2001-093730 [11] WPIDS

DOC. NO. NON-CPI: N2001-071106

DOC. NO. CPI: C2001-027807

TITLE: Transparent **laminated** glazing for cars that reflects solar and thermal rays comprises at least two glass pieces joined by a thermoplastic layer and a solar protection layer.

DERWENT CLASS: A95 L01 P73 Q12

INVENTOR(S): KRAEMLING, F; KRAEAMLING, F

PATENT ASSIGNEE(S): (COMP) SEKURIT SAINT GOBAIN DEUT GMBH & CO KG; (COMP) SAINT-GOBAIN VITRAGE

COUNTRY COUNT: 29

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 1060876	A2	20001220	(200111)*	FR	5
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT					
RO SE SI					
DE 19927683	C1	20010125	(200111)		
JP 2001039742	A	20010213	(200112)		14
BR 2000002698	A	20010313	(200118)		
CZ 2000002293	A3	20010411	(200130)		
KR 2001069207	A	20010723	(200203)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 1060876	A2	EP 2000-401676	20000614
DE 19927683	C1	DE 1999-19927683	19990617
JP 2001039742	A	JP 2000-179434	20000615
BR 2000002698	A	BR 2000-2698	20000619
CZ 2000002293	A3	CZ 2000-2293	20000619
KR 2001069207	A	KR 2000-33367	20000616

PRIORITY APPLN. INFO: DE 1999-19927683 19990617

L28 ANSWER(4) OF 9 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 2000-567035 [53] WPIDS

AB EP 1038849 A UPAB: 20001023

NOVELTY - The low emissivity glass comprises a glass substrate (1) **laminated** with metallic oxide based **films** (2,3,4,5). The metallic oxide based **films** include a first tin oxide **film** (4) containing antimony, and a second tin oxide **film** (5) containing fluorine.

DETAILED DESCRIPTION - Preferred features: The first tin oxide based **film** contains antimony in an amount of 0.01-0.2 in terms of mole ratio to amount of tin. The glass includes a third tin oxide based **film** and a silicon oxide based **film**, the first and second tin oxide based **films** being **laminated** on the silicon oxide based **film**. The first tin oxide based **film** is formed on the silicon oxide based **film**, and the second tin oxide based **film** is formed on the first tin oxide based **film**, the first **film** containing antimony in an amount of 0.01-0.1 in terms of mole ratio relative to amount of tin. Alternatively the second **film** is formed on the silicon oxide based **film** and the first **film** is formed on the second **film**. Chlorine may be present in the tin oxide based **films**.

. The substrate may be formed as a ribbon by causing a glass raw material to flow on molten tin, and the metallic oxide **films** are each formed by depositing a metallic oxide in solid phase on the glass ribbon.

An INDEPENDENT CLAIM is included for a glass article formed of the low emissivity glass, where glass plates are arranged in opposed relation to each other with a hollow layer between.

USE - For use as window glass for architecture and automobiles and glass articles such as double glazing.

ADVANTAGE - The low emissivity glass permits control of solar heat shading property within a certain range without spoiling the transparency and **heat insulating** property.

DESCRIPTION OF DRAWING(S) - The drawing shows a cross-sectional view of the structure of the low emissivity glass.

Glass substrate 1

Tin oxide based **film** 2Silicon oxide **film** 3Tin oxide based **film** containing antimony 4Tin oxide based **film** containing fluorine 5

Dwg.1/5

ACCESSION NUMBER: 2000-567035 [53] WPIDS

DOC. NO. CPI: C2000-169051

TITLE: Low emissivity glass for double glazing and automobile windscreens comprises substrate **laminated** with metallic oxide based **films**.

DERWENT CLASS: L01

INVENTOR(S): FUJISAWA, A; HIRATA, M; NORIMATSU, H; SUEYOSHI, Y;
YAMAMOTO, T

PATENT ASSIGNEE(S): (NIPG) NIPPON SHEET GLASS CO LTD

COUNTRY COUNT: 26

PATENT INFORMATION:

PATENT NO KIND DATE WEEK LA PG

 EP 1038849 A1 20000927 (200053)* EN 23
 R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
 RO SE SI
 JP 2001199744 A 20010724 (200147) 16

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 1038849	A1	EP 2000-400751	20000317
JP 2001199744	A	JP 2000-71686	20000315

PRIORITY APPLN. INFO: JP 2000-71686 20000315; JP 1999-75635
 19990319; JP 1999-316657 19991108

L28 ANSWER ⁵ OF 9 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 1992-010020 [02] WPIDS

CR 1992-184974 [23]; 1993-207127 [26]; 1996-118162 [13]

AB EP 464789 A UPAB: 20011227

A low emissivity **film** comprises a substrate and a **coating** of of oxide and metallic **films** alternately formed on the substrate in a total of $(2n+1)$ layers where n is an integer being equal to or more then one, the innermost layer being on oxide **film**. The oxide **film** (B) formed on the outer side of the metallic **film** (A), whose major component is pref. Ag, being most apart from the substrate, has an internal stress which is equal to or less

then $1.1 \text{ power } \times 10 / 10 \text{ dyne/cm}^2$. Pref. (B) is a single layer **film** or multilayer **film** having at least a layer whose major component is zinc oxide, and has a value of diffraction angle Theta 2 Theta of (002) diffraction line of the hexagonal zinc oxide in X-ray diffraction method using Cu k alpha radiation between 33.88-35.00 deg.

USE/ADVANTAGE - A glass with a low emissivity **film** can be used to prevent lavening of room temp. by reflecting thermal radiation. Similiarly, it may be used as a **car windscreen** due to the **heat insulating** effect. It has use as an electromagnetic shielding glass as it is transparent and electrically conductive. However, if generally has low durability to scratching and chemical stability, and it is necessary to use the **film** in a **laminated** or in durable glazing. The low enuis with **film** of the present invention is excellent in durability, especially in moisture and acid resistance. @ (13pp Dwg.No.1/1)@ 1/1@

ABEQ JP 05042624 A UPAB: 19931006

A barrier **film** for heat rays is composed of **laminated** layers of oxide membrane $(2n+1)$, metal membrane (n is at least 1), oxide membrane on a base material in reciprocally order, and oxide membrane (B) formed on the opposite side of metal membrane being apart from the base material is a multilayer membrane having at least one layer consisting of lead as main component and at least one layer consisting of tin oxide as main component. (B) oxide membrane is more than 3 multilayers consisting of a membrane consisting of zinc oxide as main component and a layer consisting of stannous oxide as main component in reciprocal order. Crystal series of zinc oxide is hexagonal system, value of diffraction

angle 2 theta of zinc oxide hexagonal system by X rays diffraction process

using alpha ray of CuK is in a range of 33.88 deg. - 35.00 deg. The metal membrane is composed mainly of Ag.

USE/ADVANTAGE - Since the barrier membrane has metal membrane, the membrane has heat rays barrier and electroconductivity and is pref. used as electrode

0/1

ABEQ US 5413864 A UPAB: 19950626

A low emissivity **film** comprises a substrate **coated** with alternate layers of zinc or tin oxide and metallic **films**. The layer closest to the substrate is an oxide **film**, and the oxide **film** on the outside of the layers has an internal stress up to 1.1×10^{10} dynes/cm² and is doped with an element selected from Al, Si, B, Ti, Sn, Mg and Cr. The oxide **film** is 200-700 Angstroms thick and the metallic layers are 50-150 Angstroms thick.

USE/ADVANTAGE - Esp. in solar cells or for electromagnetic shielding.

It can also be used in windows to reduce solar gain. Good chemical stability and moisture resistance.

Dwg.1/1

ABEQ US 5419969 A UPAB: 19950712

A low emissivity **film** comprises a **coating** of oxide **films** and **films** whose major component is Ag alternately formed on a substrate in a total of $(2n+1)$ layers, the layer closest to the substrate being an oxide **film**. The integral width of the (111) diffraction line of a cubic Ag in an X-ray diffraction pattern of the **film** is between $180 \lambda / d \pi \cos(-)$ and $180 \lambda / (d \pi \cos(-)) + 0.15$, where d (Angstroms) is the thickness of a **film** whose major component is Ag, π (Angstroms) is the wavelength of the X-rays used and $(-)$ is the Bragg angle. The Ag-contg. **films** are 80-160 Angstroms thick and the oxide **films** are 200-700 Angstroms. The internal stress of the oxide **film** most remote from the substrate is 1.1×10^{10} dyne/cm² or less.

USE/ADVANTAGE - As an electrically heated window for defogging or deicing. Excellent durability, esp. moisture resistance.

Dwg.1A/4

ABEQ US 5532062 A UPAB: 19960819

A low emissivity **film** comprising: a substrate and a **coating** of an oxide **film**, a metal **film**, an oxide **film** and so on alternately formed on the substrate in this order in a total of $(2n+1)$ layers where n is an integer being equal to or more than 1, where an oxide **film** (B) formed on the side opposite to a metal **film** (A) being most remote from the substrate in view from the substrate, contains at least one layer of a zinc oxide **film** doped with at least one dopant selected from the gp. consisting of Si, Ti, Cr, B, Mg and Ga by 1 through 10 atomic % w.r.t.

the

total amt. of dopant and Zn, said oxide **film** (B) formed on the side opposite to a metal **film** (A) being most remote from the substrate having a thickness of 200 to 700 Angstrom and the metal **film** having a thickness of 50 to 160 Angstrom.

Dwg.0/2

ABEQ EP 464789 B UPAB: 19961111

A low emissivity **film** which comprises: a substrate; and a **coating** of oxide **films** (B) and metallic **films**

(A) alternately formed on the substrate in a total of (2n+1) layers where n is an integer being equal to or more than 1, with the innermost layer being an oxide film, wherein the oxide film (B) formed on the outer side of the metallic film (A) being most apart from the substrate, is a multi-layer film having at least a layer whose major component is zinc oxide and a layer whose major component is tin oxide.

Dwg.1/1

ACCESSION NUMBER: 1992-010020 [02] WPIDS
 CROSS REFERENCE: 1992-184974 [23]; 1993-207127 [26]; 1996-118162 [13]
 DOC. NO. NON-CPI: N1992-007702
 DOC. NO. CPI: C1992-004279
 TITLE: Layered low emissivity film - comprises substrate with alternate oxide and metallic films

DERWENT CLASS: A35 A89 A94 L01 L03 M13 P73 P81 V04 X22 X25
 INVENTOR(S): ANDO, E; MIYAZAKI, M
 PATENT ASSIGNEE(S): (ASAG) ASAHI GLASS CO LTD
 COUNTRY COUNT: 13
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 464789	A	19920108	(199202)*		13
R: BE CH DE ES FR GB IT LI SE					
CA 2046161	A	19920106	(199214)		
JP 04357025	A	19921210	(199304)		8
JP 05042624	A	19930223	(199313)		8
US 5413864	A	19950509	(199524)		9
US 5419969	A	19950530	(199527)		10
US 5532062	A	19960702	(199632)		10
EP 464789	B1	19961009	(199645)	EN	10
R: BE CH DE ES FR GB IT LI SE					
DE 69122554	E	19961114	(199651)		
ES 2095271	T3	19970216	(199714)		
SG 43266	A1	19971017	(199801)		
SG 47839	A1	19980417	(199827)		
JP 3053668	B2	20000619	(200033)		7
JP 3053669	B2	20000619	(200033)		5
CA 2046161	C	20010821	(200154)	EN	
US 37446	E	20011113	(200176)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 464789	A	EP 1991-111022	19910703
JP 04357025	A	JP 1991-191063	19910705
JP 05042624	A	JP 1991-191064	19910705
US 5413864	A	US 1991-726263	19910705
US 5419969	A	US 1991-726263	19910705
		US 1991-799306	19911127
US 5532062	A	US 1991-726263	19910705
	CIP of	US 1991-799306	19911127
	CIP of	US 1991-799306	19911127
	Cont of	US 1992-996062	19921223
		US 1994-305812	19940914

EP 464789	B1	EP 1991-111022	19910703
DE 69122554	E	DE 1991-622554	19910703
		EP 1991-111022	19910703
ES 2095271	T3	EP 1991-111022	19910703
SG 43266	A1	SG 1996-6706	19910703
SG 47839	A1	SG 1996-4642	19910703
JP 3053668	B2	JP 1991-191063	19910705
JP 3053669	B2	JP 1991-191064	19910705
CA 2046161	C	CA 1991-2046161	19910703
US 37446	E	US 1991-726263	19910705
		US 1997-853953	19970509

FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 5532062	A	US 5413864
	CIP of	US 5419969
DE 69122554	E	EP 464789
ES 2095271	T3	EP 464789
JP 3053668	B2	JP 04357025
JP 3053669	B2	JP 05042624
US 37446	E	US 5413864
	Reissue of	

PRIORITY APPLN. INFO: JP 1990-321273 19901127; JP 1990-176282
19900705; JP 1990-325914 19901129; JP
1991-357810 19911226; JP 1992-266689 19920909

=>

=> d L32 abs, ibib 1-2

L32 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2002 ACS

AB The **coatings** comprise .gtoreq.1 **cholesteric layers** reflecting .gtoreq.40, esp.45%, of the incident radiation at wavelengths >750. esp. 751-2000 nm. The **coatings** are formed by depositing on a transparent substrate .gtoreq.1 **IR-reflecting cholesteric layers**, hardening the layers, and, optionally, .gtoreq.1 **IR-reflecting cholesteric layers**, and, optionally, a medium reversing the direction of rotation of the transmitted circularly polarized radiation, and hardening the layers. A **cholesteric coating** contg. cellulose acetobutyrate 0.027 and 2,4,6-trimethylbenzoyldiphenylphosphine oxide 0.073 mol reflected 47% of radiation of wavelength 943 nm.

ACCESSION NUMBER: 1999:265927 HCAPLUS

DOCUMENT NUMBER: 130:270776

TITLE: **IR-reflecting thermally insulating coatings**, their formation, the multicomponent layer systems obtained and their use, and adhesive foils comprising the **thermally insulating coating**

INVENTOR(S): Siemensmeyer, Karl; Schuhmacher, Peter; Meyer, Frank; Schneider, Norbert; Ishida, Hiroki

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 51 pp.

Melanie Bissett

09/509548 Heat Insulating Coating

CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9919267	A1	19990422	WO 1998-EP6527	19981014
W: AL, AU, BG, BR, BY, CA, CN, CZ, GE, HU, ID, IL, JP, KR, KZ, LT, LV, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TR, UA, US, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19745647	A1	19990422	DE 1997-19745647	19971015
AU 9911540	A1	19990503	AU 1999-11540	19981014
EP 1025057	A1	20000809	EP 1998-954417	19981014
R: AT, BE, DE, DK, ES, FR, GB, IT, NL, SE, PT				
BR 9813066	A	20000822	BR 1998-13066	19981014
JP 2001519317	T2	20011023	JP 2000-515844	19981014
NO 2000001845	A	20000410	NO 2000-1845	20000410
PRIORITY APPLN. INFO.:			DE 1997-19745647	A 19971015
			WO 1998-EP6527	W 19981014
REFERENCE COUNT:	8	THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE		

FORMAT

L32 ANSWER 2 OF 2 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 1999-255808 [22] WPIDS
AB DE 19745647 A UPAB: 19990609

NOVELTY - **Heat insulation** covering comprises a **cholesteric** layer(s) that reflects at least 40, preferably at least 45% of light of **IR** wavelength, preferably above 750, especially 751-2000 nm.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the production of the above material by applying a **cholesteric IR-reflecting** layer to a transparent substrate and curing, a multi-component comprising components suitable for giving **cholesteric** layers, and **heat insulation** covering sheets, preferably adhesive sheets, made of the above.

USE - In the production of **insulating** windows or **heat-insulating** building materials, office-, home- or industry-insulation and in the automobile sector, particularly for bonded **glass** (all claimed).

ADVANTAGE - The **coating** does not contain environmentally undesirable metals, and is transparent in the electromagnetic wavelength range but hardly absorbent in the **IR** range, avoiding heating-up of the **coated** article.

Dwg.0/0

ACCESSION NUMBER: 1999-255808 [22] WPIDS
DOC. NO. NON-CPI: N1999-190511
DOC. NO. CPI: C1999-075049
TITLE: **Heat insulation** covering for e.g. insulation and in automobile sector.
DERWENT CLASS: A32 A82 A93 A95 G02 G03 L01 P81 Q43 Q67
INVENTOR(S): ISHIDA, H; MEYER, F; SCHNEIDER, N; SCHUHMACHER, P;

Melanie Bissett

09/509548 Heat Insulating Coating

PATENT ASSIGNEE(S): SIEMENSMEYER, K
(BADI) BASF AG
COUNTRY COUNT: 48
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 19745647	A1	19990422	(199922)*		28
WO 9919267	A1	19990422	(199923)	GE	
RW: AT BE CH CY DE DK EA ES FI FR GB GR IE IT LU MC NL PT SE					
W: AL AU BG BR BY CA CN CZ GE HU ID IL JP KR KZ LT LV MX NO NZ PL RO					
RU SG SI SK TR UA US					
AU 9911540	A	19990503	(199937)		
EP 1025057	A1	20000809	(200039)	GE	
R: AT BE DE DK ES FR GB IT NL PT SE					
NO 2000001845	A	20000410	(200039)		
BR 9813066	A	20000822	(200050)		
CN 1276773	A	20001213	(200118)		
KR 2001024514	A	20010326	(200161)		
JP 2001519317	W	20011023	(200202)		59

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19745647	A1	DE 1997-19745647	19971015
WO 9919267	A1	WO 1998-EP6527	19981014
AU 9911540	A	AU 1999-11540	19981014
EP 1025057	A1	EP 1998-954417	19981014
		WO 1998-EP6527	19981014
NO 2000001845	A	WO 1998-EP6527	19981014
		NO 2000-1845	20000410
BR 9813066	A	BR 1998-13066	19981014
		WO 1998-EP6527	19981014
CN 1276773	A	CN 1998-810274	19981014
KR 2001024514	A	KR 2000-704065	20000415
JP 2001519317	W	WO 1998-EP6527	19981014
		JP 2000-515844	19981014

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9911540	A Based on	WO 9919267
EP 1025057	A1 Based on	WO 9919267
BR 9813066	A Based on	WO 9919267
JP 2001519317	W Based on	WO 9919267

PRIORITY APPLN. INFO: DE 1997-19745647 19971015

L Number	Hits	Search Text	DB	Time stamp
-	89	(((((liquid adj crystal) and (cholesteric (chiral with nematic)) and reflect\$3 and wavelength) and (((liquid adj crystal) (cholesteric (chiral with nematic)).ti.ab,clm.)) and 428/\$.ccls.) and (rotation pitch handedness)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/02/21 10:04
-	62	(((((liquid adj crystal) and (cholesteric (chiral with nematic)) and (reflect\$3 with wavelength)) and (((liquid adj crystal) (cholesteric (chiral with nematic)).ti.ab,clm.)) and 428/\$.ccls.) and (rotation pitch handedness)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/01/30 13:57
-	23	(liquid adj crystal) and (cholesteric (chiral with nematic)) and ((reflect\$3 and wavelength) same (incident adj radiation))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/02/21 10:06